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(54) Title: COMPOSITION COMPRISING AT LEAST ONE HETEROPOLYMER AND AT LEAST ONE INERT FILLER AND METHODS FOR USE

(57) Abstract: A physiologically acceptable composition containing at least one liquid fatty phase which comprises at least one structuring polymer having a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and at least one inert filler, with the proviso that the at least one inert filler is not acrylates polymer, silica, talc, or a bentonite clay.



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## COMPOSITION COMPRISING AT LEAST ONE HETEROPOLYMER AND AT LEAST ONE INERT FILLER AND METHODS FOR USE

The present invention relates to a care and/or treatment and/or make-  
5 up composition for the skin, including the scalp, and/or for the lips of human  
beings, and/or for other keratin materials, such as keratinous fibers,  
containing a liquid fatty phase, structured with a specific polymer containing a  
hetero atom. This composition is stable over time and is especially in the  
form of a make-up stick and more especially a foundation stick or a stick of  
10 lipstick, whose application produces a migration-resistant deposit which  
shows good staying power or long-wearing properties.

The foundations currently marketed are usually either in the form of a  
liquid packaged in a bottle, or in the form of a product compacted in a case  
(see, for example, U.S. Patent No. 5,186,318). These foundations may  
15 require the use of an applicator such as a sponge, which may rapidly become  
contaminated and must be cleaned very regularly, especially after each  
application. Thus, users of foundations are increasingly on the lookout for  
solid foundations in tube or stick form, in order to dispense with the sponge-  
type applicator. Such a foundation may be easy to use, hygienic and can be  
20 applied until all of the product has been used up, unlike a conventional  
foundation applied with a sponge. Furthermore, the surface of the foundation  
may remain smooth, whereas the surface of a product compacted in a case  
may become deformed under the pressure of the successive uptakes onto  
the applicator. Finally, a foundation in tube or stick form may allow a uniform  
25 make-up effect to be obtained.

Conventional lipsticks and concealer products are also usually in the  
form of a tube or stick, as are deodorants and lipcare or antisen lip products.

These cosmetic or dermatological products contain a structured liquid  
fatty phase, *i.e.*, a phase which is gelled and/or rigidified with structural  
30 agents such as waxes.

For the purposes of the invention, the expression "liquid fatty phase" means a fatty phase which is liquid at room temperature (25°C) and atmospheric pressure (760 mmHg), and comprises at least one (as used throughout herein, the expression "at least one" means one or more and thus  
5 includes individual components as well as mixtures/combinations) fatty substance that is liquid at room temperature, also referred to as an oil, that is generally mutually compatible. The expression "liquid fatty substance" means a non-aqueous liquid medium which is immiscible in all proportions with water, for example, a hydrocarbon-based compound comprising at least one  
10 carbon chain containing at least 5 carbon atoms and possibly comprising at least one polar group chosen from carboxylic acid, hydroxyl, polyol, amine, amide, phosphoric acid, phosphate, ester, ether, urea, carbamate, thiol, thioether and thioester, a silicone compound optionally comprising carbon chains at the end or pendant, these chains optionally being substituted with a  
15 group chosen from fluoro, perfluoro, (poly)amino acid, ether, hydroxyl, amine, acid and ester groups; or a fluoro or perfluoro compound such as fluorohydrocarbons or perfluorohydrocarbons containing at least 5 carbon atoms, possibly comprising a hetero atom chosen from N, O, S and P and optionally at least one polar function chosen from ether, ester, amine, acid,  
20 carbamate, urea, thiol and hydroxyl groups. In practice, the total liquid fatty phase may be present, for example, in an amount ranging from 1% to 99% by weight relative to the total weight of the composition; further examples include ranges of 5% to 95.5%, 10% to 80%, and 20% to 75%.

For the purposes of the present invention, the term "wax" means a  
25 lipophilic fatty compound that is solid at room temperature (25°C) and atmospheric pressure (760 mmHg), which undergoes a reversible solid/liquid change of state, having a melting point of greater than 40°C, for example greater than 55°C, such as up to 200°C, and having an anisotropic crystal organization in the solid state. The size of the crystals may be such that the  
30 crystals diffract and/or scatter light, giving the composition a cloudy, more or

less opaque appearance. By bringing the wax to its melting point, it is possible to make it miscible with oils and to form a microscopically homogeneous mixture, but on returning the temperature of the mixture to room temperature, recrystallization of the wax in the oils of the mixture is  
5 obtained, this recrystallization being responsible for the rigidification of the liquid fatty phase.

For the purposes of the invention, the waxes are those generally used in cosmetics and dermatology; they are, for instance, chosen from waxes of natural origin, such as beeswax, carnauba wax, candelilla wax, ouricury wax,  
10 Japan wax, cork fibre wax, sugar cane wax, paraffin wax, lignite wax, microcrystalline waxes, lanolin wax, montan wax, ozokerites and hydrogenated oils such as hydrogenated jojoba oil, as well as waxes of synthetic origin, for instance polyethylene waxes derived from the polymerization or copolymerization of ethylene, waxes obtained by Fischer-  
15 Tropsch synthesis, fatty acid esters and glycerides that are solid at 40°C, for example at above 55°C, silicone waxes such as alkyl- and alkoxy-poly(di)methylsiloxanes and/or poly(di)methylsiloxane esters that are solid at 40°C, for example at above 55°C.

According to the invention, the melting point values may correspond to  
20 the melting peak measured by the "Differential Scanning Calorimetry" method with a temperature rise of 5 or 10°C/min.

Unfortunately, the waxes currently used may give the composition a greasy and oily feel and/or a greasy and lank sensation. Furthermore, manufacturing a stick with waxes often poses problems of reproducibility on  
25 account of the melting point variability of the various waxes that are commercially available.

Now, the structuring of the liquid fatty phase with waxes makes it possible, in addition to obtaining a product in the form of a stick or tube, to limit the exudation of the fatty phase from the solid compositions, especially in  
30 hot and humid regions, and to limit, after deposition on the skin or the lips, the

migration of this phase in the wrinkles and fine lines, which is particularly sought after for a lipstick, a concealer product or an eyeshadow. Specifically, large migration of the liquid fatty phase, in particular when it is charged with coloring agents, may lead to an unpleasant appearance around the lips and the eyes, which particularly makes the wrinkles and fine lines more prominent. This migration is often mentioned by consumers as being a major defect of conventional lipsticks, concealer products and eye make-ups in stick form. The term "migration" means a running of the composition beyond the initial application line.

10       The structuring of the liquid fatty phase and the limitation of its exudation and of the migration of the deposit on the skin or the lips may increase as the wax content increases. Thus, the content of these structuring agents may be a constraining factor on the comfort and lightness of make-up products in stick form.

15       Furthermore, make-up compositions should have good staying power or long wearing properties over time and in particular of the color. Poor staying power is characterized by a color change (turning, fading) or a non-uniform change in the make-up effect over time, generally following an interaction with sebum and/or sweat secreted by the skin, and, for the lips, an interaction with saliva. Specifically, a composition which does not have good staying power or long-wearing properties over time may oblige the user to reapply the make-up regularly. However, consumers nowadays wish to enhance the beauty of their face or body while spending as little time as possible in doing so.

25       To overcome at least one of these drawbacks, the present inventors have envisaged replacing all or some of the waxes with polymers for structuring the liquid fatty phase, for example, of the polyamide, polyurea or polyurethane type. Unfortunately, the sticks obtained may have a greater or lesser tendency to exude, in particular in a hot and humid environment, and/or to become brittle when applied to the lips or the skin. This

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embrittlement may be reflected by breakage of the stick, during its shear on application.

Furthermore, the majority of make-up or care compositions, when applied to the skin, the eyelashes or the lips, may have the drawback of transferring, *i.e.*, of being at least partly deposited and leaving marks on certain supports with which they may come into contact, such as a glass, a cup, a cigarette, an item of clothing or the skin. This may result in mediocre persistence of the film applied, making it necessary to reapply the composition regularly, such as a foundation or a lipstick. However, as noted above, users nowadays wish to achieve beauty enhancement of their face, including the lips, and their body while spending as little time as possible in doing so. Moreover, the appearance of these unacceptable marks, *e.g.*, on shirt collars, can put certain consumers off using this type of make-up.

Cosmeticians have been interested in "transfer-resistant" lipstick compositions for several years, and more recently in "transfer-resistant" foundation compositions. Thus, in its patent application JP-A-61-65809, the company Shiseido envisaged "transfer-resistant" lipstick compositions containing a siloxysilicate resin (with a three-dimensional network), a volatile silicone oil containing a cyclic silicone chain and pulverulent fillers. Similarly, in document JP-A-62-61911, the company Noevier disclosed "transfer-resistant" lipstick, eyeliner and foundation compositions comprising one or more volatile silicones combined with one or more hydrocarbon-based waxes.

Although these compositions have improved "transfer-resistance" properties, they have the drawback of leaving on the lips, after the silicone oils have evaporated off, a film which becomes uncomfortable over time (sensation of drying out the lips and of tautness), a characteristic which puts a certain number of consumers off using this type of lipstick.

The need thus remains for a composition which does not have at least one of the above drawbacks, for example, which has at least one of good mechanical and thermal stability over time, even in hot and humid countries,

and which produces a deposit on the skin or the lips that has at least one of the following characteristics: shows good staying power over time, does not migrate, and does not transfer. Furthermore, this composition should be easy to manufacture and, in an embodiment of the invention, gives the deposit at  
5 least one of a comfortable and non-greasy sensation, both during application and over time.

Accordingly, in one aspect, the present invention is drawn to a care and/or make-up and/or treatment composition for the skin and/or the lips of the face and/or for superficial body growths, such as keratinous fibres, such  
10 as hair, which may make it possible to overcome at least one of the drawbacks mentioned above. It is to be noted that a deodorant product is a body hygiene product and does not relate to care, make-up or treatment of keratin materials, including keratinous fibers, skin, or lips.

The inventors have found, surprisingly, that the use of specific  
15 polymers combined with at least one filler may make it possible to obtain a composition in rigid form such as a stick, whose application to the skin or the lips produces a deposit which has noteworthy cosmetic properties. For example, the deposit may be at least one of supple, comfortable, light and "migration-resistant". In addition, in the presence of volatile solvent, the  
20 composition may show good transfer-resistance properties.

Moreover, the composition may be stable over time, may withstand shear during application and may not exude at room temperature or at elevated temperature (40 to 47°C approximately); it can be heat stable. In addition, it can have a pleasant, fondant texture and can slide easily on the  
25 skin or the lips without being greasy.

The expression "heat stable" means a composition which does not exude at room temperature for at least 2 months, such as, for example, for at least 9 months, or at 37°C or at 47°C for one month.

The invention applies not only to make-up products for the lips, such  
30 as lipsticks, lip glosses and lip pencils, but also to care and/or treatment



products for the skin, including the scalp, and for the lips, such as antison products, for example in stick form for facial skin or the lips, care products for the human face or body, make-up products for the skin, both of the human face and body, such as foundations optionally cast in stick or dish form, 5 concealer products, blushers, make-up removing, eyeshadows, face powders, transfer tattoos, body hygiene products such as deodorants, e.g., in stick form, shampoos, conditioners and make-up products for the eyes such as eyeliners, eye pencils and mascaras, e.g., in cake form, as well as make-up and care products for superficial body growths, for instance keratinous fibers 10 such as the hair, the eyelashes and the eyebrows.

The at least one liquid fatty phase further contains at least one inert filler. The at least one liquid fatty phase, the at least one structuring polymer and the at least one inert filler form a physiologically acceptable medium.

In one embodiment, the at least one structuring polymer has a weight- 15 average molecular mass of less than 100,000.

In one aspect, the present invention is drawn to a structured composition containing at least one liquid fatty phase structured with at least one structuring polymer comprising a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom. 20 In one embodiment, the at least one structuring polymer further comprises at least one terminal fatty chain, optionally functionalized, comprising at least one chain chosen from alkyl and alkenyl chains, such as alkyl and alkenyl chains comprising at least 4 carbons atoms, and further such as alkyl and alkeny chains comprising from 8 to 120 carbon atoms, bonded to the polymer 25 skeleton via at least one linking group. The at least one structuring polymer may also further comprise at least one pendant fatty chain, optionally functionalized, comprising at least one chain chosen from alkyl and alkenyl chains, such as alkyl and alkenyl chains comprising at least 4 carbons atoms, and further such as alkyl and alkeny chains comprising from 8 to 120 carbon 30 atoms, bonded to any carbon or hetero atom of the polymer skeleton via at

least one linking group. The at least one structuring polymer may comprise both at least one pendant fatty chain and at least one terminal fatty chain as defined above. The at least one liquid fatty phase further contains at least one inert filler. The at least one liquid fatty phase, the at least one structuring  
5 polymer and the at least one inert filler form a physiologically acceptable medium.

The composition of the invention can be in the form of a paste, a solid or a more or less viscous cream. It can be a single or multiple emulsion, such as an oil-in-water or water-in-oil emulsion or an oil-in-water-in-oil emulsion, or  
10 a rigid or soft gel containing an oily continuous phase. For example, the liquid fatty phase can be the continuous phase of the composition. In one embodiment, the composition is in a form cast as a stick or in a dish, for example, in the form of an oily rigid gel, such as an anhydrous gel, *e.g.*, an anhydrous stick. In a further embodiment, the composition is in the form of  
15 an opaque or translucent rigid gel (depending on the presence or absence of pigments), and in a specific example, the liquid fatty phase forms the continuous phase.

The structuring of the liquid fatty phase can be modified according to the nature of the polymer containing a hetero atom and of the inert filler used,  
20 and may be such that a rigid structure in the form of a tube or stick with good mechanical strength is obtained. When these tubes or sticks are colored, they may make it possible, after application, to obtain a uniformly colored glossy deposit which does not migrate and which has good staying power or long-wearing properties, in particular of the color, over time.

25 The composition of the invention may, for example, be a composition for the skin or the lips, such as a foundation composition, concealer product, eyeshadow or lipstick composition, *e.g.*, in stick form.

### ***Structuring polymer***

In one embodiment, the at least one structuring polymer in the  
30 composition of the invention is a solid that is not deformable at room

temperature (25°C) and atmospheric pressure (760 mmHg). In a further embodiment, the at least one structuring polymer is capable of structuring the composition without opacifying it. As defined above, the at least one structuring polymer of the present invention comprises a polymer skeleton

5 comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom. In one embodiment, the at least one structuring polymer further comprises at least one terminal fatty chain chosen from alkyl and alkenyl chains, such as of at least 4 atoms, and further such as comprising 8 to 120 carbon atoms, bonded to the polymer skeleton via at least one linking

10 group. The terminal fatty chain may, for example, be functionalized. The at least one structuring polymer may also further comprise at least one pendant fatty chain chosen from alkyl and alkenyl chains, such as of at least 4 atoms, and further such as comprising 8 to 120 carbon atoms, bonded to any carbon or hetero atom of the polymer skeleton via at least one linking group. The

15 pendant fatty chain may, for example, be functionalized. The at least one structuring polymer may comprise both at least one pendant fatty chain and at least one terminal fatty chain as defined above, and one or both types of chains can be functionalized.

In one embodiment, the structuring polymer comprises at least two

20 hydrocarbon-based repeating units. As a further example, the structuring polymer comprises at least three hydrocarbon-based repeating units and as an even further example, the at least three repeating units are identical.

As used herein, "functionalized" means comprising at least one functional group. Non-limiting examples of functional groups include hydroxyl

25 groups, ether groups, oxyalkylene groups, polyoxyalkylene groups, carboxylic acid groups, amine groups, amide groups, halogen containing groups, including fluoro and perfluoro groups, halogen atoms, ester groups, siloxane groups and polysiloxane groups.

For purposes of the invention, the expression "functionalized chain"

30 means, for example, an alkyl chain comprising at least one functional

(reactive) group chosen, for example, from those recited above. For example, in one embodiment, the hydrogen atoms of at least one alkyl chain may be substituted at least partially with fluorine atoms.

According to the invention, these chains may be linked directly to the  
5 polymer skeleton or via an ester function or a perfluoro group.

For the purposes of the invention, the term "polymer" means a compound containing at least 2 repeating units, such as, for example, a compound containing at least 3 repeating units, which may be identical.

As used herein, the expression "hydrocarbon-based repeating unit"  
10 includes a repeating unit comprising from 2 to 80 carbon atoms, such as, for example, from 2 to 60 carbon atoms. The at least one hydrocarbon-based repeating unit may also comprise oxygen atoms. The hydrocarbon-based repeating unit may be chosen from saturated and unsaturated hydrocarbon-based repeating units which in turn may be chosen from linear hydrocarbon-based repeating units, branched hydrocarbon-based repeating units and  
15 cyclic hydrocarbon-based repeating units. The at least one hydrocarbon-based repeating unit may comprise, for example, at least one hetero atom that is part of the polymer skeleton, *i.e.*, not pendant. The at least one hetero atom may be chosen, for example, from nitrogen, sulphur, and phosphorus.  
20 For example, the at least one hetero atom may be a nitrogen atom, such as a non-pendant nitrogen atom. In another embodiment, the at least one hydrocarbon-based repeating unit may comprise at least one hetero atom with the proviso that the at least one hetero atom is not nitrogen. In another embodiment, the at least one hetero atom is combined with at least one atom  
25 chosen from oxygen and carbon to form a hetero atom group. In one embodiment, the hetero atom group comprises a carbonyl group.

The at least one repeating unit comprising at least one hetero atom may be chosen, for example, from amide groups, carbamate groups, and urea groups. In one embodiment, the at least one repeating unit comprises  
30 amide groups forming a polyamide skeleton. In another embodiment, the at

least one repeating unit comprises carbamate groups and/or urea groups forming a polyurethane skeleton, a polyurea skeleton and/or a polyurethane-polyurea skeleton. The pendant chains, for example, can be linked directly to at least one of the hetero atoms of the polymer skeleton. In yet another  
5 embodiment, the at least one hydrocarbon-based repeating unit may comprise at least one hetero atom group with the proviso that the at least one hetero atom group is not an amide group. In one embodiment, the polymer skeleton comprises at least one repeating unit chosen from silicone units and oxyalkylene units, the at least one repeating unit being between the  
10 hydrocarbon-based repeating units.

In one embodiment, the compositions of the invention comprise at least one structuring polymer with nitrogen atoms, such as amide, urea, or carbamate units, such as amide units, and at least one polar oil.

In one embodiment, in the at least one structuring polymer, the  
15 percentage of the total number of fatty chains ranges from 40% to 98% relative to the total number of repeating units and fatty chains, and as a further example, from 50% to 95%. In a further embodiment wherein the polymer skeleton is a polyamide skeleton, in the at least one structuring polymer, the percentage of the total number of fatty chains ranges from 40%  
20 to 98% relative to the total number of all amide units and fatty chains, and as a further example, from 50% to 95%.

In a further embodiment, the nature and proportion of the at least one hydrocarbon-based repeating unit comprising at least one hetero atom depends on the nature of a liquid fatty phase of the composition and is, for  
25 example, similar to the nature of the fatty phase. For example, not to be limited as to theory, the more polar the hydrocarbon-based repeating units containing a hetero atom, and in high proportion, which corresponds to the presence of several hetero atoms, the greater the affinity of the at least one structuring polymer to polar oils. Conversely, the more non-polar, or even  
30 apolar, and lesser in proportion the hydrocarbon-based repeating units

containing a hetero atom, the greater the affinity of the polymer for apolar oils.

In another embodiment, the invention is drawn to a structured composition containing at least one liquid fatty phase structured with at least one structuring polymer, wherein said at least one structuring polymer is a polyamide comprising a polymer skeleton comprising at least one amide repeating unit and optionally at least one pendant fatty chain and/or at least one terminal chain that are optionally functionalized and comprising at least one chain chosen from alkyl and alkenyl chains, such as alkyl and alkenyl chains comprising at least 4 carbons atoms, and further such as alkyl and alkenyl chains comprising from 8 to 120 carbon atoms, bonded to at least one of the amide repeating units via at least one linking group. The liquid fatty phase further contains at least one inert filler for gelling the liquid fatty phase. The at least one liquid fatty phase, the at least one structuring polyamide and the at least one inert filler together form a physiologically acceptable medium.

When the structuring polymer has amide repeating units, the pendant fatty chains may be linked to at least one of the nitrogen atoms in the amide repeating units.

The structuring polymer, for example the polyamide polymer, may have a weight-average molecular mass of less than 100,000, such as less than 50,000. In another embodiment, the weight-average molecular mass may range from 1000 to 30,000, such as from 2000 to 20,000, further such as from 2000 to 10,000.

As discussed, the at least one structuring polymer may, for example, be chosen from polyamide polymers. A polyamide polymer may comprise, for example, a polymer skeleton which comprises at least one amide repeating unit, *i.e.*, a polyamide skeleton. In one embodiment, the polyamide skeleton may further comprise at least one terminal fatty chain chosen from alkyl chains, for example, alkyl chains comprising at least four carbon atoms, and alkenyl chains, for example, alkenyl chains comprising at least four carbon atoms, bonded to the at least one polyamide skeleton via at least one linking

group, and/or at least one pendant fatty chain chosen from alkyl chains, for example, alkyl chains comprising at least four carbon atoms, and alkenyl chains, for example, alkenyl chains comprising at least four carbon atoms, bonded to the at least one polyamide skeleton via at least one linking group.

- 5 In one embodiment, the polyamide skeleton may comprise at least one terminal fatty chain chosen from fatty chains comprising 8 to 120 carbon atoms, such as, for example, 12 to 68 carbon atoms, bonded to the at least one polyamide skeleton via at least one linking group and/or at least one pendant fatty chain chosen from fatty chains comprising 8 to 120 carbon
- 10 atoms, such as, for example, 12 to 68 carbon atoms, bonded to the at least one polyamide skeleton via at least one linking group, such as bonded to any carbon or nitrogen of the polyamide skeleton via said at least one linking group. In one embodiment, the at least one linking group is chosen from single bonds and urea, urethane, thiourea, thiourethane, thioether, thioester,
- 15 ester, ether and amine groups. In another embodiment, the linking groups are chosen from ureas, esters, and amines, and as a further example, from esters and amines. The bond is, for example, an ester bond. In one embodiment, these polymers comprise a fatty chain at each end of the polymer skeleton, such as the polyamide skeleton.

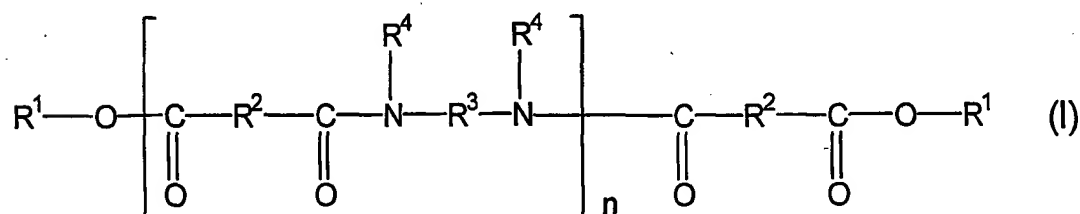
- 20 In one embodiment, due to the presence of at least one chain, the polyamide polymers may be readily soluble in oils (*i.e.*, water-immiscible liquid compounds) and thus may give macroscopically homogeneous compositions even with a high content (at least 25%) of the polyamide polymers, unlike certain polymers of the prior art that do not contain such alkyl or alkenyl
- 25 chains at the end of the polyamide skeleton. As defined herein, a composition is soluble if it has a solubility of greater than 0.01 g per 100 ml of solution at 25°C.

In a further embodiment, the polyamide polymers can be chosen from polymers resulting from at least one polycondensation reaction between at

least one acid chosen from dicarboxylic acids comprising at least 32 carbon atoms, such as 32 to 44 carbon atoms, and at least one amine chosen from diamines comprising at least 2 carbon atoms, such as from 2 to 36 carbon atoms, and triamines comprising at least 2 carbon atoms, such as from 2 to 36 carbon atoms. The dicarboxylic acids can, for example, be chosen from dimers of at least one fatty acid comprising at least 16 carbon atoms, such as oleic acid, linoleic acid and linolenic acid. The at least one amine can, for example, be chosen from diamines, such as ethylenediamine, hexylenediamine, hexamethylenediamine, phenylenediamine and triamines, such as ethylenetriamine.

The polyamide polymers may also be chosen from polymers comprising at least one terminal carboxylic acid group. The at least one terminal carboxylic acid group can, for example, be esterified with at least one alcohol chosen from monoalcohols comprising at least 4 carbon atoms. For example, the at least one alcohol can be chosen from monoalcohols comprising from 10 to 36 carbon atoms. In a further embodiment, the monoalcohols can comprise from 12 to 24 carbon atoms, such as from 16 to 24 carbon atoms, and for example 18 carbon atoms.

In one embodiment, the at least one polyamide polymer may be chosen from those described in U.S. Patent No. 5,783,657, the disclosure of which is incorporated herein by reference, which are polyamide polymers of formula (I):





in which:

- n is an integer which represents the number of amide units such that the  
5 number of ester groups present in said at least one polyamide polymer ranges from 10% to 50% of the total number of all said ester groups and all said amide groups comprised in the at least one polyamide polymer;
- R<sup>1</sup>, which are identical or different, are each chosen from alkyl groups comprising at least 4 carbon atoms and alkenyl groups comprising at least 4  
10 carbon atoms. In one embodiment, the alkyl group comprises from 4 to 24 carbon atoms and the alkenyl group comprises from 4 to 24 carbon atoms;
- R<sup>2</sup>, which are identical or different, are each chosen from C<sub>4</sub> to C<sub>42</sub> hydrocarbon-based groups with the proviso that at least 50% of all R<sup>2</sup> are chosen from C<sub>30</sub> to C<sub>42</sub> hydrocarbon-based groups;
- 15 - R<sup>3</sup>, which are identical or different, are each chosen from organic groups comprising atoms chosen from carbon atoms, hydrogen atoms, oxygen atoms and nitrogen atoms with the proviso that R<sup>3</sup> comprises at least 2 carbon atoms; and
- R<sup>4</sup>, which are identical or different, are each chosen from hydrogen atoms,  
20 C<sub>1</sub> to C<sub>10</sub> alkyl groups and a direct bond to at least one group chosen from R<sup>3</sup> and another R<sup>4</sup> such that when said at least one group is chosen from another R<sup>4</sup>, the nitrogen atom to which both R<sup>3</sup> and R<sup>4</sup> are bonded forms part of a heterocyclic structure defined in part by R<sup>4</sup>-N-R<sup>3</sup>, with the proviso that at least 50% of all R<sup>4</sup> are chosen from hydrogen atoms.

25 In the polymer of formula (I), the terminal fatty chains that are optionally functionalized for the purposes of the invention are terminal chains linked to the last hetero atom, in this case nitrogen, of the polyamide skeleton.

In one embodiment, the ester groups of formula (I), which form part of the terminal and/or pendant fatty chains for the purposes of the invention, are

present in an amount ranging from 15% to 40% of the total number of ester and amide groups, such as from 20% to 35%.

In formula (I), in one embodiment,  $n$  may be an integer ranging from 1 to 5, for example an integer ranging from 3 to 5. In the present invention,  $R^1$ ,  
5 which are identical or different, can, for example, each be chosen from  $C_{12}$  to  $C_{22}$  alkyl groups, such as from  $C_{16}$  to  $C_{22}$  alkyl groups.

In the present invention,  $R^2$ , which are identical or different, can, for example, each be chosen from  $C_{10}$  to  $C_{42}$  hydrocarbon-based, e.g., alkylene groups. At least 50% of all  $R^2$ , for example at least 75% of all  $R^2$ , which are  
10 identical or different, can, for example, each be chosen from groups comprising from 30 to 42 carbon atoms. In the two aforementioned embodiments, the remaining  $R^2$ , which are identical or different, can, for example, each be chosen from  $C_4$  to  $C_{18}$  groups, such as  $C_4$  to  $C_{12}$  groups.

$R^3$ , which can be identical or different, can, for example, each be  
15 chosen from  $C_2$  to  $C_{36}$  hydrocarbon-based groups and polyoxyalkylene groups. In another example,  $R^3$ , which can be identical or different, can each, for example, be chosen from  $C_2$  to  $C_{12}$  hydrocarbon-based groups. In another embodiment,  $R^4$ , which can be identical or different, can each be chosen from hydrogen atoms. As used herein, hydrocarbon-based groups may be chosen  
20 from linear, cyclic and branched, and saturated and unsaturated groups. The hydrocarbon-based groups can be chosen from aliphatic and aromatic groups. In one example, the hydrocarbon-based groups are chosen from aliphatic groups. The alkyl and alkylene groups may be chosen from linear, cyclic and branched, and saturated and unsaturated groups.

25 In general, the pendant and terminal fatty chains may be chosen from linear, cyclic and branched, and saturated and unsaturated groups. The pendant and terminal fatty chains can be chosen from aliphatic and aromatic groups. In one example, the pendant and terminal fatty chains are chosen from aliphatic groups.

According to the invention, the structuring of the liquid fatty phase is obtained with the aid of at least one structuring polymer, such as the at least one polymer of formula (I). The at least one polyamide polymer of formula (I) may, for example, be in the form of a mixture of polymers, and this mixture  
5 may also comprise a compound of formula (I) wherein  $n$  is equal to zero, *i.e.*, a diester.

Non-limiting examples of an at least one polyamide polymer which may be used in the composition according to the present invention include the commercial products sold by Arizona Chemical under the names Uniclear 80  
10 and Uniclear 100. These are sold, respectively, in the form of an 80% (in terms of active material) gel in a mineral oil and a 100% (in terms of active material) gel. These polymers have a softening point ranging from 88°C to 94°C, and may be mixtures of copolymers derived from monomers of (i)  $C_{36}$  diacids and (ii) ethylenediamine, and have a weight-average molecular mass  
15 of about 6000. Terminal ester groups result from esterification of the remaining acid end groups with at least one alcohol chosen from cetyl alcohol and stearyl alcohol. A mixture of cetyl and stearyl alcohols is sometimes called cetylstearyl alcohol.

Other non-limiting examples of an at least one polyamide polymer  
20 which may be used in the compositions according to the present invention include polyamide polymers resulting from the condensation of at least one aliphatic dicarboxylic acid and at least one diamine, the carbonyl and amine groups being condensed via an amide bond. In one embodiment, these polymers contain more than two carbonyl groups and more than two amine  
25 groups. Examples of these polyamide polymers are those sold under the brand name Versamid by the companies General Mills Inc. and Henkel Corp. (Versamid 930, 744 or 1655) or by the company Olin Mathieson Chemical Corp. under the brand name Onamid, in particular Onamid S or C. These resins have a weight-average molecular mass ranging from 6000 to 9000.  
30 For further information regarding these polyamides, reference may be made

to U.S. Patent Nos. 3,645,705 and 3,148,125, the disclosures of which are hereby incorporated by reference. In one embodiment, Versamid 930 or 744 may be used.

Other examples of polyamides include those sold by the company  
5 Arizona Chemical under the references Uni-Rez (2658, 2931, 2970, 2621, 2613, 2624, 2665, 1554, 2623 and 2662) and the product sold under the reference Macromelt 6212 by the company Henkel. For further information regarding these polyamides, reference may be made to U.S. Patent No. 5,500,209, the disclosure of which is hereby incorporated by reference. Such  
10 polyamides display high melt viscosity characteristics. MACROMELT 6212, for example, has a high melt viscosity at 190°C of 30-40 poise (as measured by a Brookfield Viscometer, Model RVF #3 spindle, 20 RPM).

In a further embodiment, the at least one polyamide polymer may be chosen from polyamide resins from vegetable sources. Polyamide resins  
15 from vegetable sources may be chosen from, for example, the polyamide resins of U.S. Patent Nos. 5,783,657 and 5,998,570, the disclosures of which are herein incorporated by reference.

The at least one structuring polymer in the compositions of the invention may have a softening point greater than 50°C, such as from 65°C  
20 to 190°C, and further such as from 70°C to 130°C, and even further such as from 80°C to 105°C. This softening point may be lower than that of structuring polymers used in the art which may facilitate the use of the at least one structuring polymer of the present invention and may limit the degradation of the liquid fatty phase. These polymers may be non waxy  
25 polymers.

In one embodiment, the at least one structuring polymer in the composition according to the invention corresponds to the polyamide polymers of formula (I). Due to fatty chain(s), these polymers may be readily soluble in oils and thus lead to compositions that are macroscopically

homogeneous even with a high content (at least 25%) of at least one structuring polymer, unlike polymers not containing a fatty chain.

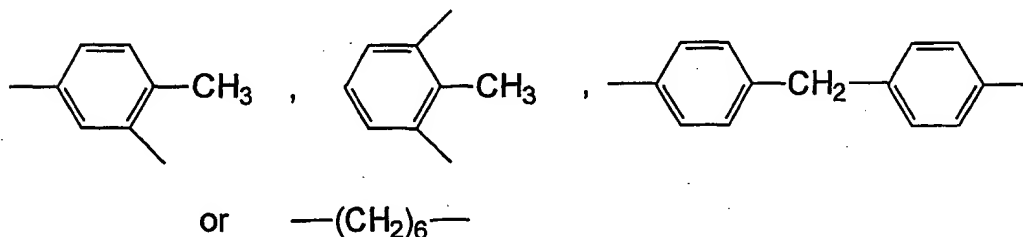
The at least one structuring polymer may be present in the composition in an amount ranging, for example, from 0.5% to 80% by weight relative to the total weight of the composition, such as for example 2% to 60%, and further, for example, from 5 to 40%. In a further embodiment the at least one structuring polymer may be present in the composition in an amount ranging, for example, from 5% to 25% by weight relative to the total weight of the composition.

When the at least one structuring polymer of the present invention comprises a urea urethane having the following formula:

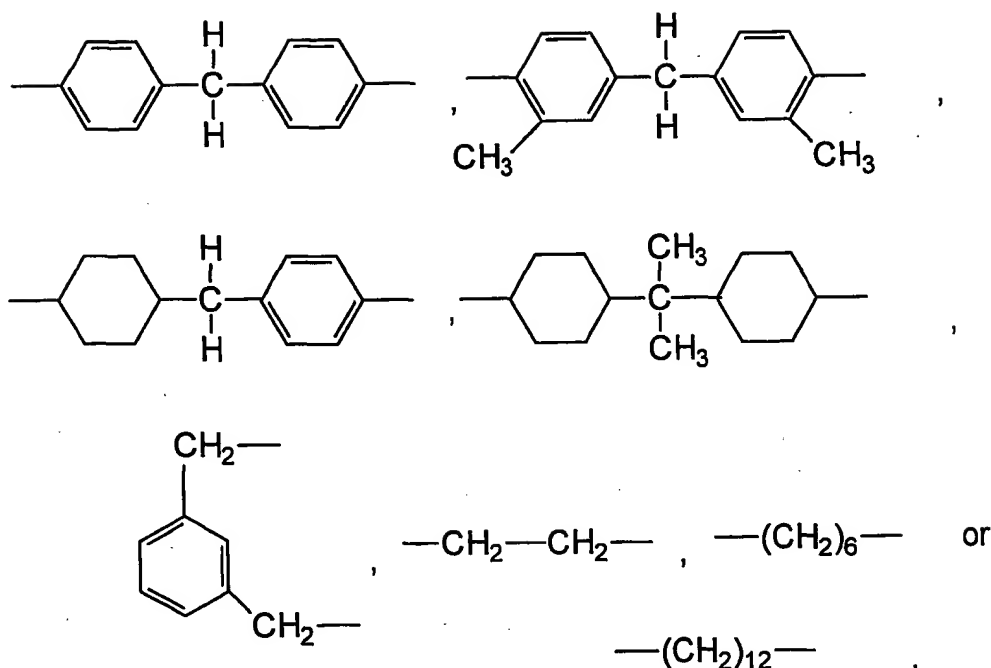


then R represents  $\text{C}_n\text{H}_{2n+1}$ , wherein n represents an integer having a value greater than 22, for example from 23 to 120, and further, for example from 23 to 68, or  $\text{C}_m\text{H}_{2m+1}(\text{OC}_p\text{H}_{2p})_r$ -, wherein m represents an integer having a value of greater than 18, for example from 19 to 120, and further, for example, from 23 to 68, p represents an integer having a value of from 2 to 4, and r represents an integer having a value of from 1 to 10,

R' represents:



and R'' represents:



In another embodiment of the invention, the present invention is drawn to a structured composition comprising at least one liquid fatty phase structured with at least one structuring polymer comprising a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom, wherein the at least one structuring polymer further comprises at least one terminal fatty chain, optionally functionalized, chosen from alkyl and alkenyl chains, such as alkyl and alkenyl chains having at least four carbon atoms, and further such as alkyl and alkenyl chains comprising from 8 to 120 carbon atoms, bonded to the polymer skeleton via at least one linking group chosen from amides, ureas, and esters, wherein when said at least one linking group is chosen from esters, said at least one terminal fatty chain is chosen from branched alkyl groups. The at least one structuring polymer may also comprise at least one pendant fatty chain, optionally functionalized, chosen from alkyl and alkenyl chains, such as alkyl and

alkenyl chains having at least four carbon atoms, and further such as alkyl and alkenyl chains comprising from 8 to 120 carbon atoms, bonded to any carbon or hetero atom of the polymer skeleton via at least one linking group chosen from amides, ureas, and esters, wherein when said at least one  
5 linking group is chosen from esters, said at least one terminal fatty chain is chosen from branched alkyl groups. The at least one structuring polymer may comprise both at least one pendant fatty chain and at least one terminal fatty chain as defined above in this paragraph.

Further, an embodiment of the invention relates to a skin, lip, or  
10 keratinous fiber care or make-up composition comprising a structured composition containing at least one liquid fatty phase structured with at least one structuring polymer comprising a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom and at least one inert filler.

15 Additionally, an embodiment of the invention relates to a skin, lip, or keratinous fiber care or make-up composition comprising a structured composition containing at least one liquid fatty phase structured with at least one structuring polymer comprising a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom, at  
20 least one inert filler, and at least one coloring agent.

Additionally, an embodiment of the invention relates to a method of making up skin, lips or keratinous fibers or caring for skin, lips keratinous fibers or treating skin, lips or keratinous fibers comprising applying to said  
25 skin, lips, or keratinous fibers a structured composition containing at least one liquid fatty phase structured with at least one structuring polymer comprising a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom and at least one inert filler.

***Inert Filler***

According to the invention, the composition contains at least one inert filler. The term "filler" means any particle that is solid at room temperature and atmospheric pressure, used alone or in combination, which does not  
5 react chemically with the various ingredients of the composition and which is insoluble in these ingredients, even when these ingredients are raised to a temperature above room temperature and in particular to their softening point or their melting point.

The at least one inert filler has a melting point at least greater than  
10 170°C, for example, greater than 200°C. The at least one inert filler may or may not be absorbent, *i.e.*, capable in particular of absorbing the oils of the composition and also the biological substances secreted by the skin. The absorbent fillers often have the property of making the deposit of composition on the keratin materials matte, which is particularly desired for a foundation  
15 and a concealer product. In one embodiment, the at least one inert filler may have an apparent diameter ranging from 0.01 µm to 150 µm, such as from 0.5 µm to 120 µm, for example from 1 µm to 80 µm. An apparent diameter corresponds to the diameter of the circle into which the elementary particle fits along its shortest dimension (thickness for leaflets).

20 The at least one inert filler may be present in the inventive composition in an amount ranging from 0.1% to 40% relative to the weight of the total composition, such as from 2% to 30%, and, for example, from 5% to 20%.

The at least one inert filler may be mineral or organic, and lamellar, spherical or oblong. The at least one inert filler may be chosen from talc,  
25 mica, silica, kaolin, polyamide powders such as Nylon® (Orgasol® from Atochem) powder, poly-β-alanine powder, polyethylene powder, acrylic polymer powder and in particular polymethyl methacrylate (PMMA) powder, for instance the product sold by Wacker under the reference Covabead LH-85 (particle size 10-12 µm) or acrylic acid copolymer powder (Polytrap® from Dow  
30 Corning), polytetrafluoroethylene (Teflon®) powders, lauroyllysine, boron



nitride, starch, hollow polymer microspheres such as those of polyvinylidene chloride/acrylonitrile, for instance Expancel® (Nobel Industrie), hollow polymer microspheres (Tospearl® from Toshiba, for example), precipitated calcium carbonate, magnesium carbonate and hydrocarbonate, hydroxyapatite, hollow  
5 silica microspheres (Silica Beads® from Maprecos), glass or ceramic microcapsules and polyester particles. The at least one inert filler may be surface-treated, e.g., to make them lipophilic.

The at least one inert filler may be porous so as to absorb the sweat and/or sebum secreted by the skin. Such inert fillers include silica,  
10 polyethylene powder, polyamide (Nylon®) powder, kaolin, starch derivatives and Polytrap®.

In order to minimize the exudation of the composition in cast form, the at least one inert filler used in the composition may contain a chemical group of the same chemical nature as those of the units of the structuring polymer  
15 or a chemical group capable of forming physical bonds of the same type as that of the units of the polymer (for example, chosen from self-complementary hydrogen bonds,  $\pi$  interactions between unsaturated rings or filler-transfer interactions, dipolar interactions, and coordination bonds with organometallic derivatives). Thus, for structuring polymers containing units of the amide,  
20 urea and/or urethane type, the at least one inert filler used may contain groups capable of forming hydrogen bonds, like these structuring polymers. As fillers capable of forming hydrogen bonds, mention may be made of fillers or particles of acrylic polymer such as PMMA for instance the product sold by Wacker under the reference Covabead LH-85 (particle size 10-12  $\mu\text{m}$ ) and  
25 Polytrap® sold by Dow Corning, hydrophobic-treated silica, polyamide (Nylon®) powders (Orgasol® from Atochem), and mixtures thereof. For units of the ester type, the fillers used may be of the polyester type.

The surface of the silica may be chemically modified, by hydrophobic chemical treatments, giving rise to a decrease in the number of silanol  
30 groups. The hydrophobic groups may be:

- trimethylsiloxy groups, which are obtained, for example, by treating fumed silica in the presence of hexamethyldisilazane. Silicas thus treated are known as "silica silylate" according to the CTFA (6th edition, 1995). They are sold, for example, under the references "Aerosil R812<sup>®</sup>" by the company Degussa and "CAB-O-SIL TS-530<sup>®</sup>" by the company Cabot;
- dimethylsilyloxy or polydimethylsiloxane groups, which are obtained, for example, by treating fumed silica in the presence of polydimethylsiloxane or dimethyldichlorosilane. Silicas thus treated are known as "silica dimethyl silylate" according to the CTFA (6th edition, 1995). They are sold, for example, under the references "Aerosil R972<sup>®</sup>" and "Aerosil R974<sup>®</sup>" by the company Degussa, and "CAB-O-SIL TS-610<sup>®</sup>" and "CAB-O-SIL TS-720<sup>®</sup>" by the company Cabot;
- groups derived from reacting fumed silica with silane alkoxides or siloxanes. These treated silicas are, for example, the products sold under the reference "Aerosil R805<sup>®</sup>" by the company Degussa.

According to the invention, a hydrophobic silica, such as a fumed silica, may be used as lipophilic gelling agent or rheological agent. The use of fumed silica may make it possible to obtain a translucent or even transparent composition, in particular in the form of a stick which does not exude, in the absence of opacifying particles such as waxes, fillers and pigments (including naces).

### ***Amphiphilic Compound***

The at least one structuring polymer and the at least one inert filler can be combined with at least one amphiphilic compound that is liquid and non-volatile at room temperature and has a hydrophilic/lipophilic balance (HLB) value of less than 12, for example ranging from 1 to 8 or from 1 to 5. These amphiphilic compounds may act to reinforce the structuring properties of the polymer containing at least one hetero atom, to facilitate the implementation of the polymer and to improve the ability of the stick to be deposited.

However, it is possible to obtain a stick with good mechanical and/or thermal properties without including at least one amphiphilic compound.

Depending on the intended application, such as a stick, hardness of the composition may also be considered. The hardness of a composition  
5 may, for example, be expressed in grams (g). The composition of the present invention may, for example, have a hardness ranging from 20 g to 2000 g, such as from 20 g to 900 g, and further such as from 20 g to 600 g.

This hardness is measured in one of two ways. A first test for hardness is according to a method of penetrating a probe into said  
10 composition and in particular using a texture analyzer (for example TA-XT2 from Rheo) equipped with an ebonite cylinder of height 25 mm and diameter 8 mm. The hardness measurement is carried out at 20°C at the center of 5 samples of said composition. The cylinder is introduced into each sample of composition at a pre-speed of 2 mm/s and then at a speed of 0.5 mm/s and  
15 finally at a post-speed of 2 mm/s, the total displacement being 1 mm. The recorded hardness value is that of the maximum peak observed. The measurement error is  $\pm 50$ g.

The second test for hardness is the "cheese wire" method, which involves cutting an 8.1 mm or 12.7 mm in diameter tube of composition and  
20 measuring its hardness at 20°C using a DFGHS 2 tensile testing machine from Indelco-Chatillon Co. at a speed of 100 mm/minute. The hardness value from this method is expressed in grams as the shear force required to cut a stick under the above conditions. According to this method, the hardness of compositions according to the present invention which may be in stick form  
25 may, for example, range from 30 g to 300 g, such as from 30 g to 250 g, and further such as from 30 g to 200 g.

The hardness of the composition of the present invention may be such that the compositions are self-supporting and can easily disintegrate to form a satisfactory deposit on a keratinous material. In addition, this hardness may  
30 impart good impact strength to the inventive compositions which may be

molded or cast, for example, in stick or dish form. The composition of the invention may be a solid, in the form of molded or poured sticks.

The skilled artisan may choose to evaluate a composition using at least one of the tests for hardness outlined above based on the application envisaged and the hardness desired. If one obtains an acceptable hardness value, in view of the intended application, from at least one of these hardness tests, the composition falls within the scope of the invention.

As is evident, the hardness of the composition according to the invention may, for example, be such that the composition is advantageously self-supporting and can disintegrate easily to form a satisfactory deposit on the skin and/or the lips and/or superficial body growths, such as keratinous fibres. In addition, with this hardness, the composition of the invention may have good impact strength.

According to the invention, the composition in stick form may have the behavior of a deformable, flexible elastic solid, giving noteworthy elastic softness on application. The compositions in stick form of the prior art do not have these properties of elasticity and flexibility.

The at least one amphiphilic compound which can be used in the composition of the invention may, for example, comprise a lipophilic part linked to a polar part, the lipophilic part comprising a carbon-based chain containing at least 8 carbon atoms, for example from 18 to 32 carbon atoms or from 18 to 28 carbon atoms. The polar part of the at least one amphiphilic compound may, in one embodiment, be the residue of a compound chosen from alcohols and polyols containing from 1 to 12 hydroxyl groups, and polyoxyalkylenes comprising at least 2 oxyalkylene units and containing from 0 to 20 oxypropylene units and/or from 0 to 20 oxyethylene units. For example, the at least one amphiphilic compound may be an ester chosen from the hydroxystearates, oleates and isostearates of glycerol, of sorbitan and of methylglucose, and from branched C<sub>12</sub> to C<sub>26</sub> fatty alcohols such as

octyldodecanol. Among these esters, monoesters and mixtures of mono- and diesters can also be used.

The respective contents of the at least one lipophilic inert filler, the at least one polymer containing a hetero atom and optionally that of at least one  
5 amphiphilic compound are chosen according to the desired hardness of the composition and as a function of the specific application envisaged. The respective amounts of polymer, of inert filler and of amphiphilic compound should be such that they produce a stick which can be worn down. In practice, the amount of the at least one polymer may be chosen from 0.5% to  
10 80% of the total weight of the composition, for example from 2% to 60%, from 5% to 40%, and from 5% to 25%. The amount of at least one amphiphilic compound in practice, if it is present, may be chosen from 0.1% to 35% of the total weight of the composition, for example from 1% to 20% or from 1% to 15%.

15 The at least one structuring polymer has an affinity with the fatty phase and in particular with a chemical portion of one of the oils forming the liquid fatty phase of the composition so that physical links with the oils, such as hydrogen bonds, or as above-mentioned, are formed.

#### ***Liquid Fatty Phase***

20 The at least one liquid fatty phase, in one embodiment, may comprise at least one oil. The at least one oil, for example, may be chosen from polar oils and apolar oils including hydrocarbon-based liquid oils and oily liquids at room temperature. In one embodiment, the compositions of the invention comprise at least one structuring polymer and at least one polar oil. The  
25 polar oils of the invention, for example, may be added to the apolar oils, the apolar oils acting in particular as co-solvent for the polar oils.

According to the invention, the structuring of the at least one liquid fatty phase may be obtained with the aid of at least one structuring polymer, such as the polymer of formula (I). In general, the polymers of formula (I) may be  
30 in the form of mixtures of polymers, these mixtures also possibly containing a

synthetic product corresponding to a compound of formula (I) in which  $n$  is 0, *i.e.*, a diester.

The liquid fatty phase of the composition may contain more than 30%, for example, more than 40%, of liquid oil(s) having a chemical nature close to the chemical nature of the skeleton (*hydrocarbon or silicone based*) of the structuring polymer, and for example from 50% to 100%. In one embodiment, the liquid fatty phase structured with a polyamide-type skeleton, or polyurea, or polyurethane, or polyurea-urethane-type skeleton contains a high quantity, *i.e.*, greater than 30%, for example greater than 40% relative to the total weight of the liquid fatty phase, or from 50% to 100%, of at least one apolar, such as hydrocarbon-based, oil. For the purposes of the invention, the expression "hydrocarbon-based oil" means an oil comprising carbon and hydrogen atoms, optionally with at least one group chosen from hydroxyl, ester, carboxyl and ether groups.

For a liquid fatty phase structured with a polymer containing a partially silicone-based skeleton, this fatty phase may contain more than 30%, for example, more than 40%, relative to the total weight of the liquid fatty phase and, for example, from 50% to 100%, of at least one silicone-based liquid oil, relative to the total weight of the liquid fatty phase.

For a liquid fatty phase structured with an apolar polymer of the hydrocarbon-based type, this fatty phase may contain more than 30%, for example more than 40% by weight, and, as a further example, from 50% to 100% by weight, of at least one liquid apolar, such as hydrocarbon-based, oil, relative to the total weight of the liquid fatty phase.

For example, the at least one polar oil useful in the invention may be chosen from:

- hydrocarbon-based plant oils with a high content of triglycerides comprising fatty acid esters of glycerol in which the fatty acids may have varied chain lengths from  $C_4$  to  $C_{24}$ , these chains possibly being chosen from linear and branched, and saturated and unsaturated chains; these oils can be chosen

- from, for example, wheat germ oil, corn oil, sunflower oil, karite butter, castor oil, sweet almond oil, macadamia oil, apricot oil, soybean oil, cotton oil, alfalfa oil, poppy oil, pumpkin oil, sesame oil, marrow oil, rapeseed oil, avocado oil, hazelnut oil, grape seed oil, blackcurrant seed oil, evening primrose oil, millet oil, barley oil, quinoa oil, olive oil, rye oil, safflower oil, candlenut oil, passion flower oil and musk rose oil; or alternatively caprylic/capric acid triglycerides such as those sold by Stearineries Dubois or those sold under the names Miglyol 810, 812 and 818 by Dynamit Nobel;
- synthetic oils or esters of formula  $R_5COOR_6$  in which  $R_5$  is chosen from
    - 10 linear and branched fatty acid residues containing from 1 to 40 carbon atoms and  $R_6$  is chosen from, for example, a hydrocarbon-based chain containing from 1 to 40 carbon atoms, on condition that  $R_5 + R_6 \geq 10$ , such as, for example, purcellin oil (cetostearyl octanoate), isononyl isononanoate,  $C_{12}$ - $C_{15}$  alkyl benzoates, isopropyl myristate, 2-ethylhexyl palmitate, isostearyl
    - 15 isostearate and alkyl or polyalkyl octanoates, decanoates or ricinoleates; hydroxylated esters such as isostearyl lactate and diisostearyl malate; and pentaerythritol esters;
    - synthetic ethers containing from 10 to 40 carbon atoms;
    - $C_8$  to  $C_{26}$  fatty alcohols such as oleyl alcohol; and
    - 20 -  $C_8$  to  $C_{26}$  fatty acids such as oleic acid, linolenic acid or linoleic acid.

The at least one apolar oil according to the invention is chosen from, for example, silicone oils chosen from volatile and non-volatile, linear and cyclic polydimethylsiloxanes (PDMSs) that are liquid at room temperature; polydimethylsiloxanes comprising alkyl or alkoxy groups which are pendant

25 and/or at the end of the silicone chain, the groups each containing from 2 to 24 carbon atoms; phenylsilicones such as phenyl trimethicones, phenyl dimethicones, phenyl trimethylsiloxy diphenylsiloxanes, diphenyl dimethicones, diphenyl methyl diphenyl trisiloxanes and 2-phenylethyl trimethylsiloxysilicates; hydrocarbons chosen from linear and branched,

30 volatile and non-volatile hydrocarbons of synthetic and mineral origin, such as

volatile liquid paraffins (such as isoparaffins and isododecane) or non-volatile liquid paraffins and derivatives thereof, liquid petrolatum, liquid lanolin, polydecenes, hydrogenated polyisobutene such as Parleam®, and squalane; and mixtures thereof. The structured oils, for example those structured with  
5 polyamides such as those of formula (I) or with polyurethanes, polyureas, polyurea-urethanes, in accordance with the invention, may be, in one embodiment, apolar oils, such as an oil or a mixture of hydrocarbon oils chosen from those of mineral and synthetic origin, chosen from hydrocarbons such as alkanes such as Parleam® oil, isoparaffins including isododecane,  
10 and squalane, and mixtures thereof. These oils may, in one embodiment, be combined with at least one phenylsilicone oil.

The liquid fatty phase, in one embodiment, contains at least one non-volatile oil chosen from, for example, hydrocarbon-based oils of mineral, plant and synthetic origin, synthetic esters or ethers, silicone oils and mixtures  
15 thereof.

In practice, the total liquid fatty phase can be, for example, present in an amount ranging from 5% to 99% by weight relative to the total weight of the composition, for example from 10% to 80%, and, as a further example, from 20% to 75%.

20 For the purposes of the invention, the expression "volatile solvent or oil" means any non-aqueous medium capable of evaporating on contact with the skin or the lips in less than one hour at room temperature and atmospheric pressure. The volatile solvent(s) of the invention is(are) organic solvents, such as volatile cosmetic oils that are liquid at room temperature,  
25 having a non-zero vapor pressure, at room temperature and atmospheric pressure, ranging in particular from  $10^{-2}$  to 300 mmHg and, for example, greater than 0.3 mmHg. The expression "non-volatile oil" means an oil which remains on the skin or the lips at room temperature and atmospheric pressure for at least several hours, such as those having a vapor pressure of less than  
30  $10^{-2}$  mmHg.



According to the invention, these volatile solvents may facilitate the staying power or long wearing properties over time and also the transfer-resistance properties of the composition on the skin, the lips or superficial body growths. Thus, the composition may contain at least one volatile solvent, such as at least one volatile oil. This at least one volatile solvent can be chosen from hydrocarbon-based solvents, silicone solvents optionally comprising alkyl or alkoxy groups that are pendent or at the end of a silicone chain, fluoro solvents, and mixtures thereof. The transfer-resistance properties are the ability of a deposit of the composition on the skin, the lips or superficial body growths not to become deposited onto a support placed in contact with the said deposit. These transfer-resistance properties are particularly advantageous when the composition contains coloring agents, which is especially the case for make-up compositions.

As volatile PDMSs which can be used in the invention, mention may be made of linear or cyclic silicone oils having a viscosity at room temperature of less than 8 cSt and containing, for example, from 2 to 7 silicon atoms, these silicones optionally comprising alkyl or alkoxy groups comprising from 1 to 10 carbon atoms. Volatile silicone oils that can be used in the invention may be chosen from octamethylcyclotetrasiloxane, decamethylcyclopentasiloxane, dodecamethylcyclohexasiloxane, heptamethylhexyltrisiloxane, heptamethyloctyltrisiloxane, hexamethyldisiloxane, octamethyltrisiloxane, decamethyltetrasiloxane and dodecamethylpentasiloxane, and mixtures thereof.

As volatile hydrocarbons which can be used in the invention, mention may be made of hydrocarbons comprising from 8 to 16 carbon atoms, and mixtures thereof, for example branched  $C_8$ - $C_{16}$  alkanes such as  $C_8$ - $C_{16}$  isoalkanes (also known as isoparaffins), for instance of petroleum origin, isododecane, isodecane, isohexadecane and, for example, the oils sold under the trade names Isopars or Permetyls, and mixtures thereof.  $C_8$ - $C_{16}$  branched esters such as isohexyl neopentanoate and mixtures thereof can also be

used. The at least one volatile oil may be, in one embodiment, chosen from hydrocarbons comprising from 8 to 16 carbon atoms.

The at least one volatile solvent may represent a mass content up to 97.5% relative to the total weight of the composition, such as from 1% to 75%  
5 or 10% to 60%, for example from 20% to 60%. In general, the at least one volatile solvent should be present in an amount that is sufficient to obtain transfer-resistance properties and should be adapted by a person skilled in the art as a function of the desired intensity for these transfer-resistance properties.

10 The at least one volatile solvent, in another embodiment, is present in an amount ranging up to 95.5% relative to the total weight of the composition, such as from 2% to 75%, and, as a further example, from 10% to 45%. This amount will be adapted by a person skilled in the art according to the desired staying power or long wearing properties.

15 The at least one liquid fatty phase of the compositions of the invention may further comprises a dispersion of lipid vesicles. The compositions of the invention may also, for example, be in the form of a fluid anhydrous gel, a rigid anhydrous gel, a fluid simple emulsion, a fluid multiple emulsion, a rigid simple emulsion or a rigid multiple emulsion. The simple emulsion or multiple  
20 emulsion may comprise a continuous phase chosen from an aqueous phase optionally containing dispersed lipid vesicles or oil droplets, or a fatty phase optionally containing dispersed lipid vesicles or water droplets. In one embodiment, the composition has a continuous oily phase or fatty phase and is more specifically an anhydrous composition, for example, a stick or dish  
25 form. An anhydrous composition is one that has less than 10% water by weight, such as, for example, less than 5% by weight.

#### ***Additional Additives***

The composition of the invention can also comprise any additional additive usually used in the field under consideration, such as cosmetics or  
30 dermatology, chosen, for example, from antioxidants, essential oils,

preserving agents, fragrances, waxes, fatty compounds that are pasty at room temperature, neutralizing agents, gums, liposoluble polymers or polymers that are dispersible in the medium, cosmetic or dermatological active agents such as, for example, emollients, moisturizers, vitamins, essential fatty acids, dispersants such as poly(12-hydroxystearic acid), coloring agents and mixtures thereof. These additives, if present, may each be present in the composition in a proportion of up to 20%, for example from 0.01% to 20%, and, as a further example, from 0.01% to 10% relative to the total weight of the composition.

10 The composition of the invention can also contain, as an additional additive, an aqueous phase containing water that is optionally thickened with an aqueous-phase thickener or gelled with a gelling agent and/or containing ingredients soluble in water and/or optionally water-miscible compounds. For a water-in-oil or oil-in-water emulsion, from 2% to 70% by weight of water, for example from 5% to 50% can be used.

Needless to say, a person skilled in the art will take care to select the optional additional additives and/or the amount thereof such that the advantageous properties of the composition according to the invention are not, or are not substantially, adversely affected by the envisaged addition.

20 The composition according to the invention can be in the form of a tinted dermatological composition or care composition for keratin materials such as the skin, the lips and/or superficial body growths, such as keratinous fibers, in the form of an antisen composition or body hygiene composition, such as in the form of a deodorant product or make-up-removing product in stick form. It can be used, for example, as a care base for the skin, superficial body growths or the lips, for example, lip balms, for protecting the lips against cold and/or sunlight and/or the wind, or care cream for the skin, the nails or the hair.

The composition of the invention may also be in the form of a colored make-up product for the skin, such as a foundation, optionally having care or

30

treating properties, a blusher, a face powder, an eyeshadow, a concealer product, an eyeliner, a make-up product for the body; a make-up product for the lips such as a lipstick, optionally having care or treating properties; a make-up product for superficial body growths such as the nails, the  
5 eyelashes, for example in the form of a mascara cake, or for the eyebrows and the hair, for example in the form of a pencil.

Needless to say, the composition of the invention should be cosmetically or dermatologically acceptable, *i.e.*, it should contain a non-toxic physiologically acceptable medium and should be able to be applied to the  
10 skin, superficial body growths or the lips of human beings. For the purposes of the invention, the expression "cosmetically acceptable" means a composition of pleasant appearance, odour and feel.

The composition may also contain at least one cosmetic active agent and/or at least one dermatological active agent and/or at least one coloring  
15 agent.

In one embodiment, the composition does not contain sensitizing agents, such as colophony.

### **Coloring agents**

The coloring agent according to the invention may be chosen from the  
20 lipophilic dyes, hydrophilic dyes, pigments and naces usually used in cosmetic or dermatological compositions, and mixtures thereof. This coloring agent can generally be present in a proportion of from 0.01% to 50% relative to the total weight of the composition, for example from 0.5% to 40%, and, as a further example, from 5% to 30%, if it is present. In the case of a  
25 composition in the form of a free or compacted powder, the amount of coloring agent in the form of solid particles that are insoluble in the medium (naces and/or pigments) may be up to 90% relative to the total weight of the composition.

The liposoluble dyes include, for example, Sudan Red, D&C Red 17,  
30 D&C Green 6,  $\beta$ -carotene, soybean oil, Sudan Brown, D&C Yellow 11, D&C

Violet 2, D&C Orange 5, quinoline yellow and annatto. They can be present in an amount ranging from 0.1% to 20% of the weight of the composition, for example from 0.1% to 6% (if present). The water-soluble dyes are, for example, beetroot juice or methylene blue, and can represent up to 6% of the total weight of the composition.

The pigments may be white or colored, mineral and/or organic, and coated or uncoated and having a micron size or not. Among the mineral pigments which may be mentioned are titanium dioxide, optionally surface-treated, zirconium oxide, zinc oxide or cerium oxide, as well as iron oxide, chromium oxide, manganese violet, ultramarine blue, chromium hydrate and ferric blue. Among the organic pigments which may be mentioned are carbon black, pigments of D&C type, and lakes based on cochineal carmine or on barium, strontium, calcium or aluminium. The pigment(s) can be present in an amount ranging from 0.1% to 50%, for example from 0.5% to 40%, and, as a further example, from 2% to 30% relative to the total weight of the composition, if they are present.

The nacreous pigments may be chosen from white nacreous pigments such as mica coated with titanium or with bismuth oxychloride, colored nacreous pigments such as titanium mica with iron oxides, titanium mica with, for example, ferric blue or chromium oxide, titanium mica with an organic pigment of the type mentioned above, as well as nacreous pigments based on bismuth oxychloride or alternatively interferential or goniochromatic pigments. They can be present in an amount ranging from 0.1% to 20% relative to the total weight of the composition, for example from 0.1% to 15%, if they are present, and may or may not be surface-treated.

#### Waxes

The composition can optionally contain at least one wax to improve the structuring in stick form, although this rigid form can be obtained in the absence of wax. The composition may contain little or no wax, for example, less than 5% wax.

*Liposoluble or Dispersible Polymers*

The composition of the invention may also contain at least one polymer that is liposoluble or dispersible in the medium, for example having an average molecular weight of from 500 to 1 000 000. In one embodiment, the  
5 at least one liposoluble or dispersible polymer may have an average molecular weight ranging from 1 to 500 000, for example from 5000 to 100 000 or from 5000 to 20 000. The at least one liposoluble or dispersible polymer may contribute towards increasing the viscosity and/or improving the staying power of the film. The at least one liposoluble or dispersible polymer  
10 may have a softening point of not more than 30°C.

As examples of liposoluble polymers which can be used in the invention, mention may be made of: polyalkylenes, such as polybutene, poly(meth)acrylates, alkylcelluloses with a linear or branched, saturated or unsaturated C<sub>1</sub> to C<sub>6</sub> alkyl radical, such as ethylcellulose and propylcellulose,  
15 silicone polymers that are compatible with the fatty phase, as well as vinylpyrrolidone (VP) copolymers, and mixtures thereof.

The at least one liposoluble or dispersible polymer in the composition of the invention may be used in an amount ranging from 0% to 20% (as active material) relative to the total weight of the composition, for example from  
20 0.5% to 10%, if they are present.

*Pasty fatty compound*

The composition according to the invention may also contain at least one fatty compound that is pasty at room temperature. For the purposes of the invention, the expression "pasty fatty substance" means a fatty substance  
25 with a melting point ranging from 20 to 55°C, for example from 25 to 45°C, and/or a viscosity at 40°C ranging from 0.1 to 40 Pa.s (1 to 400 poises), for example from 0.5 to 25 Pa.s, measured using a Contraves TV or Rheomat 80 viscometer, equipped with a spindle rotating at 60 Hz. A person skilled in the art can select the spindle for measuring the viscosity from the spindles MS-r3

and MS-r4, on the basis of his general knowledge, so as to be able to carry out the measurement of the pasty compound tested.

According to the invention, at least one pasty fatty substance can be used. The at least one pasty fatty substance may be chosen from

5 hydrocarbon-based compounds, optionally of polymeric type; it can also be chosen from silicone compounds and/or fluoro compounds; it may also be in the form of a mixture of hydrocarbon-based compounds and/or silicone compounds and/or fluoro compounds. In the case of a mixture of different pasty fatty substances, the hydrocarbon-based pasty compounds (containing

10 mainly hydrogen and carbon atoms and optionally ester groups) may be used in major proportion.

Among the pasty compounds which may be used in the composition according to the invention, mention may be made of lanolins and lanolin derivatives such as acetylated lanolins or oxypropylenated lanolins or

15 isopropyl lanolate, having a viscosity of from 18 to 21 Pa.s, for instance 19 to 20.5 Pa.s, and/or a melting point of from 30 to 55°C, and mixtures thereof. It is also possible to use esters of fatty acids or of fatty alcohols, such as those containing from 20 to 65 carbon atoms (melting point of about from 20 to 35°C and/or viscosity at 40°C ranging from 0.1 to 40 Pa.s), such as

20 triisostearyl citrate or cetyl citrate; arachidyl propionate; polyvinyl laurate; cholesterol esters, such as triglycerides of plant origin, such as hydrogenated plant oils (hydrogenated castor oil), viscous polyesters such as poly(12-hydroxystearic acid); polydimethylsiloxanes (PDMS) having alkyl or alkoxy pendant chains containing from 8 to 24 carbon atoms, and a melting point of

25 20-55°C, such as stearyldimethicones (in particular DC2503 and DC25514 from Dow Corning); and mixtures thereof.

The at least one pasty fatty substance may be present in a proportion up to 60% by weight, relative to the total weight of the composition, for example from 0.5% to 45% by weight, and, as a further example, from 2% to

30 30% by weight, in the composition, if present.

The composition according to the invention may be manufactured by the known processes, that are generally used in cosmetics or dermatology. It may be manufactured by the process which comprises heating the polymer at least to its softening point, in adding the amphiphilic compound(s), the coloring agents and the additives thereto and then in mixing everything together until a clear, transparent solution is obtained. After reducing the temperature of the mixture obtained, the volatile solvent(s) is(are) then added. The homogeneous mixture obtained can then be cast in a suitable mold such as a lipstick mold or directly into the packaging articles (e.g., a case or dish).

Another embodiment of the invention is also a make-up composition in stick form containing at least one continuous liquid fatty phase structured with at least one non-waxy structuring polymer having a weight-average molecular mass of less than 100 000, and at least one inert filler; the at least one liquid fatty phase, the at least one structuring polymer and the at least one inert filler forming a physiologically acceptable medium. The at least one inert filler and the at least one non-waxy structuring polymer may be such that they give the composition the appearance of a deformable elastic solid with a hardness ranging from 30 to 300 g, such as 30 to 250 g, and further such as 30 to 200 g, even in the absence of wax, as measured by the "cheese wire" method discussed above.

This make-up composition in stick form may contain at least one volatile solvent as defined above. The non-waxy polymer can, for example, be a polymer whose skeleton comprises hydrocarbon-based units containing a hetero atom, as defined above. For example, the non-waxy polymer can have a skeleton containing a polyamide group that may contain alkyl end groups linked to the skeleton via a linking group, such as of the ester type. An embodiment such as a lipstick, can contain, for example, at least one additive chosen from fatty compounds that are pasty at room temperature and waxes.



A subject of the invention is also a cosmetic care, make-up or treatment process for the keratin materials of human beings, such as the skin, the lips and superficial body growths, such as keratin materials, comprising the application to the keratin materials of the composition, for example the  
5 cosmetic composition, as defined above.

A subject of the invention is also the use of the combination of at least one structuring polymer having a weight-average molecular mass less than 100,000, such as less than 50,000, comprising a) a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least  
10 one hetero atom, and b) optionally at least one terminal fatty chain, optionally functionalized, comprising at least one chain chosen from alkyl and alkenyl chains, such as alkyl and alkenyl chains having at least 4 carbon atoms, and further such as alkyl and alkenyl chains having from 8 to 120 carbon atoms, bonded to the polymer skeleton via at least one linking group, and c)  
15 optionally at least one pendant fatty chain, optionally functionalized, comprising at least one chain chosen from alkyl and alkenyl chains, such as alkyl and alkenyl chains having at least 4 carbon atoms, and further such as alkyl and alkenyl chains having from 8 to 120 carbon atoms, bonded to the polymer skeleton via at least one linking group, and of at least one inert filler,  
20 in a cosmetic composition or for the manufacture of a physiologically acceptable composition which is solid, in particular without wax, which achieves at least one of the following characteristics: does not exude, migration-resistant deposit, non-greasy deposit, and comfortable deposit on the keratin materials.

25 Another subject of the invention is the use of a combination of at least one inert filler, of at least one volatile solvent and of at least one structuring polymer having a weight-average molecular mass less than 100,000, such as less than 50,000, comprising a) a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom, and  
30 b) optionally at least one terminal fatty chain and/or at least one pendant

chain, optionally functionalized, comprising at least one chain chosen from alkyl and alkenyl chains, such as alkyl and alkenyl chains having at least 4 carbon atoms, and further such as alkyl and alkenyl chains having from 8 to 120 carbon atoms, bonded to the polymer skeleton via at least one linking group, in a cosmetic composition or for the manufacture of a physiologically acceptable composition, as an agent for giving to a deposit of the said composition at least one of the following characteristics: staying power or long wearing, transfer-resistance properties, and properties of not leaving marks on a support placed in contact with the said deposit.

10 A subject of the invention is also the use of at least one inert filler in a physiologically acceptable composition, comprising at least one structuring polymer comprising a) a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom, and b) optionally at least one terminal fatty chain and/or at least one pendant chain, optionally functionalized, comprising at least one chain chosen from alkyl and alkenyl chains, such as alkyl and alkenyl chains having at least 4 carbon atoms, and further such as alkyl and alkenyl chains having from 8 to 120 carbon atoms, bonded to the polymer skeleton via at least one linking group, as an agent for increasing at least one of the following properties of the composition: hardness, shear strength, heat resistance.

A subject of the invention is also a cosmetic process for increasing the hardness of a physiologically acceptable composition cast in particular as a stick or as a dish and/or for increasing its shear strength and/or its heat resistance, the said composition containing at least one structuring polymer comprising a) a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom, and b) optionally at least one terminal fatty chain, optionally functionalized, comprising at least one chain chosen from alkyl and alkenyl chains, such as alkyl and alkenyl chains having at least 4 carbon atoms, and further such as alkyl and alkenyl chains having from 8 to 120 carbon atoms, bonded to the polymer skeleton via at

least one linking group, and c) optionally at least one pendant fatty chain, optionally functionalized, comprising at least one chain chosen from alkyl and alkenyl chains, such as alkyl and alkenyl chains having at least 4 carbon atoms, and further such as alkyl and alkenyl chains having from 8 to  
5 120 carbon atoms, bonded to the polymer skeleton via at least one linking group, and of at least one inert filler, which comprises introducing a sufficient amount of at least one inert filler into the composition.

Embodiments of the invention include the following:

A mascara, an eyeliner, a foundation, a lipstick, a make-up-removing  
10 product, a make-up product for the body, an eyeshadow, a face powder, a concealer product, a shampoo, a conditioner, an antisun product or a care product for the lips or hair comprising a composition comprising at least one liquid fatty phase in said mascara, eyeliner, foundation, lipstick, blusher, make-up-removing product, make-up product for the body, nail composition,  
15 eyeshadow, face powder, concealer product, shampoo, conditioner, antisun product or care product for the lips or hair which comprises:

(i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and

20 (ii) at least one inert filler.

A mascara, an eyeliner, a foundation, a lipstick, a make-up-removing product, a make-up product for the body, a nail composition, an eyeshadow, a face powder, a concealer product, a shampoo, a conditioner, an antisun product or a care product for the lips, hair or nails comprising a  
25 composition comprising at least one liquid fatty phase in said mascara, eyeliner, foundation, lipstick, blusher, make-up-removing product, make-up product for the body, nail composition, eyeshadow, face powder, concealer product, shampoo, conditioner, antisun product or care product for the lips, hair or nails which comprises:

30 (i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler, with the proviso that said at least one inert filler is not acrylates copolymer or stearylalkonium hectorite.

5 A deodorant product or a care product for the skin, lips, or body comprising a composition comprising at least one liquid fatty phase in said product which comprises:

(i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based  
10 repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler, with the proviso that said at least one inert filler is not acrylates copolymer, silica, talc, or a bentonite clay.

A care product for the skin, lips, or body comprising a composition comprising at least one liquid fatty phase in said  
15 product which comprises:

(i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler.

20 A care and/or treatment and/or make-up composition for keratinous fibers, lips or skin comprising at least one liquid fatty phase in said care and/or treatment and/or make-up composition for keratinous fibers, lips or skin which comprises:

(i) at least one structuring polymer comprising:

25 a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler.

A lipstick composition in stick form comprising at least one continuous liquid fatty phase, at least one inert filler for the fatty phase and at  
30 least one non-waxy structuring polymer having a weight-average molecular

mass of less than 100 000 in said lipstick composition, said continuous liquid fatty phase, said at least one inert filler, and said at least one non-waxy structuring polymer being present in said lipstick composition.

An eyeshadow composition comprising at least one liquid fatty phase  
5 in said eyeshadow composition which comprises:

(i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler.

10 A lipstick composition comprising at least one liquid fatty phase in said lipstick composition which comprises:

(i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and

15 (ii) at least one inert filler.

A foundation composition comprising at least one liquid fatty phase in said foundation composition which comprises:

(i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based  
20 repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler.

A method for care, make-up or treatment of keratinous fibers, lips, or skin comprising applying to said keratinous fibers, lips, or skin a composition comprising at least one liquid fatty phase which comprises:

25 (i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler.

A method for providing an anhydrous composition having at least one  
30 property chosen from a solid appearance, non-exudation, shear-strength,

gloss, and comfortable deposit on keratin materials chosen from lips, skin, and keratinous fibers, comprising including in said composition at least one liquid fatty phase which comprises:

(i) at least one structuring polymer comprising:

- 5        a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler, with the proviso that said at least one inert filler is not acrylates copolymer, silica, talc, or a bentonite clay.

- A structured composition comprising at least one liquid fatty  
10    phase structured with at least one structuring polymer comprising a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom, wherein the at least one structuring polymer further comprises at least one chain chosen from

- (i) terminal fatty chains, optionally functionalized, chosen from alkyl and  
15    alkenyl chains, bonded to the polymer skeleton via at least one linking group chosen from amides, ureas, and esters, and

- (ii) pendant fatty chains, optionally functionalized, chosen from alkyl and alkenyl chains, bonded to the polymer skeleton via at least one linking group chosen from amides, ureas, and esters,

- 20    wherein when said at least one linking group is chosen from esters, said at least one terminal fatty chain is chosen from branched alkyl groups, and further comprising at least one inert filler, with the proviso that said at least one inert filler is not acrylates copolymer, silica, talc, or a bentonite clay.

- A make up or care or treatment composition for the skin, the  
25    lips, or keratinous fibers comprising a structured composition comprising at least one liquid fatty phase structured with at least one structuring polymer comprising a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom, at least one inert filler, and at least one coloring agent.

- 30        A method of making up or caring for skin, lips, or keratinous

fibers comprising applying to said skin, lips, or keratinous fibers a structured composition comprising at least one liquid fatty phase structured with at least one structuring polymer comprising a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom  
 5 and at least one inert filler.

A anhydrous composition comprising at least one liquid fatty phase which comprises:

(i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least three hydrocarbon-based  
 10 repeating units comprising at least one hetero atom; and

(ii) at least one inert filler, including where said at least three hydrocarbon-based repeating units are identical.

A composition comprising at least one liquid fatty phase which comprises:

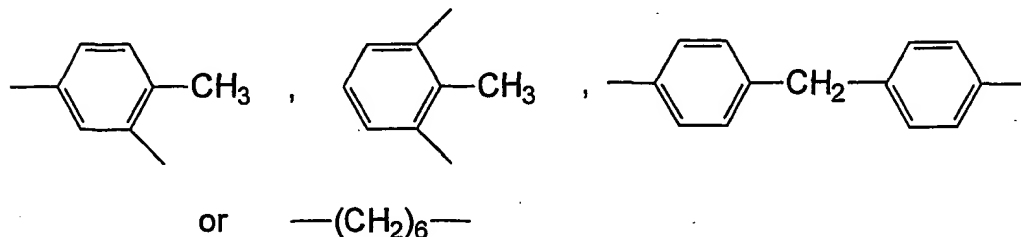
15 (i) at least one structuring polymer chosen from urea urethanes having the following formula:



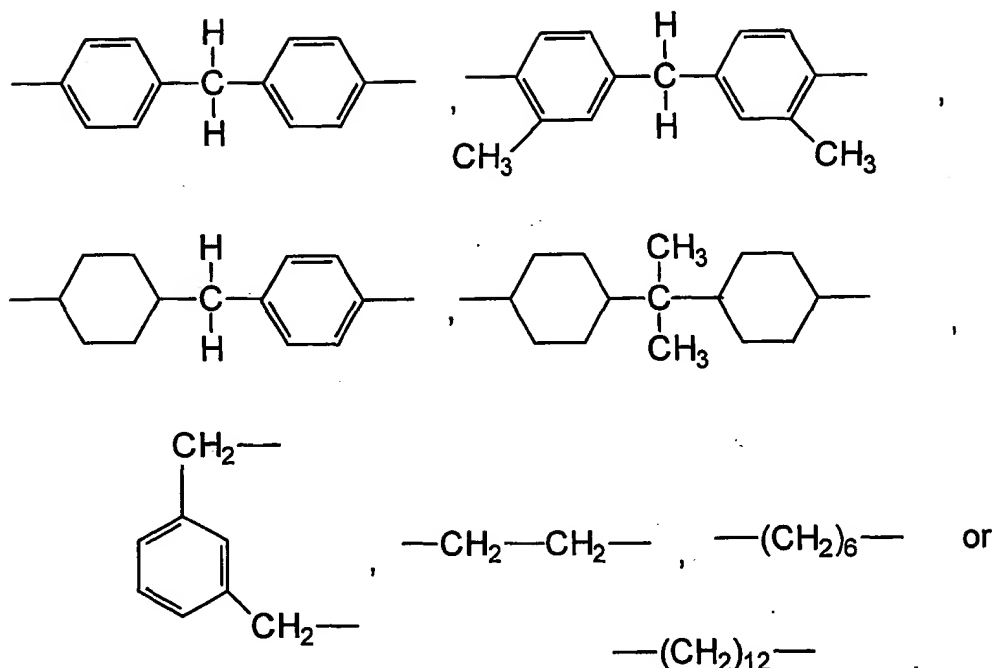
wherein R represents  $\text{C}_n\text{H}_{2n+1}-$ , wherein n represents an integer having a value greater than 22 or  $\text{C}_m\text{H}_{2m+1}(\text{OC}_p\text{H}_{2p})_r-$ , wherein m represents an integer

20 having a value of greater than 18, p represents an integer having a value of from 2 to 4, and r represents an integer having a value of from 1 to 10.

R' represents:



and R'' represents:



; and

(ii) at least one inert filler.

A composition comprising at least one liquid fatty phase which

**5 comprises:**

(i) at least one structuring polymer comprising

a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom with the proviso that said at least one hetero atom is not nitrogen; and

10 (ii) a at least one inert filler.

A composition comprising at least one liquid fatty phase which comprises:

(i) at least one structuring polymer comprising: a polymer skeleton which comprises a) at least one hydrocarbon-based repeating unit comprising at least one hetero atom and b) at least one of:



- at least one terminal fatty chain, optionally functionalized, chosen from alkyl chains and alkenyl chains, wherein said at least one terminal fatty chain is bonded to said polymer skeleton via at least one linking group; and

- 5     - at least one pendant fatty chain, optionally functionalized, chosen from alkyl chains and alkenyl chains, wherein said at least one pendant fatty chain is bonded to said polymer skeleton via at least one linking group; and
- (ii) at least one inert filler.

A make-up composition in stick form comprising at least one continuous liquid fatty phase, at least one inert filler, and at least one non-  
10 waxy structuring polymer having a weight-average molecular mass of less than 100, 000.

A method for care, make-up or treatment of keratin materials comprising applying to said keratin materials a composition comprising at least one liquid fatty phase which comprises:

- 15     (i) at least one structuring polymer comprising:  
a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and
- (ii) at least one inert filler, with the proviso that said at least one inert filler is not acrylates polymer, silica, talc, or a bentonite clay.

20     A method for care, make-up or treatment of keratin fibers comprising applying to said keratin fibers a composition comprising at least one liquid fatty phase which comprises:

- (i) at least one structuring polymer comprising:  
a polymer skeleton which comprises at least one hydrocarbon-based  
25 repeating unit comprising at least one hetero atom; and
- (ii) at least one inert filler.

A method for increasing at least one of the hardness of a composition, its shear strength and its heat resistance, comprising including in said composition at least one liquid fatty phase which comprises:

- 30     (i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler, with the proviso that said at least one inert filler is not acrylates polymer, silica, talc, or a bentonite clay.

5        A method for making a physiologically acceptable cosmetic composition comprising including in a cosmetic composition at least one liquid fatty phase which comprises:

(i) at least one structuring polymer comprising:

10        a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom, wherein said at least one structuring polymer further optionally comprises at least one of:

at least one terminal fatty chain comprising 8 to 120 carbon atoms, wherein said at least one terminal fatty chain is bonded to said polymer skeleton via at least one linking group; and

15        at least one pendant fatty chain comprising 8 to 120 carbon atoms, wherein said at least one pendant fatty chain is bonded to any carbon or hetero atom of said polymer skeleton via at least one linking group; and

(ii) at least one inert filler, with the proviso that said at least one inert filler is not acrylates polymer, silica, talc, or a bentonite clay.

20        A structured composition comprising at least one liquid fatty phase structured with at least one structuring polymer comprising a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom, wherein the at least one structuring polymer further comprises at least one of: terminal and pendant fatty chains, optionally functionalized, said terminal and pendant fatty chains comprising at  
25        least one chain chosen from alkyl and alkenyl chains, bonded to the polymer skeleton via at least one linking group chosen from amides, ureas, and esters, wherein when said at least one linking group is chosen from esters, said terminal fatty chains are chosen from branched alkyl groups, wherein  
30        said at least one liquid fatty phase also comprises at least one inert filler, with

the proviso that said at least one inert filler is not acrylates copolymer, silica, talc, or a bentonite clay.

A structured anhydrous composition comprising at least one liquid fatty phase structured with at least one structuring polymer comprising a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom, wherein the at least one structuring polymer further comprises at least one of: terminal and pendant fatty chains, optionally functionalized, said terminal and pendant fatty chains comprising at least one chain chosen from alkyl and alkenyl chains, bonded to the polymer skeleton via at least one linking group chosen from amides, ureas, and esters, wherein when said at least one linking group is chosen from esters, said terminal fatty chains are chosen from branched alkyl groups, wherein said at least one liquid fatty phase also comprises at least one inert filler.

A skin or lip care composition comprising a structured composition comprising at least one liquid fatty phase structured in said composition with at least one structuring polymer comprising a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom, at least one inert filler, and at least one coloring agent.

A keratinous fiber treatment, care or make-up composition comprising a structured composition containing at least one liquid fatty phase structured in said composition with at least one structuring polymer comprising a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom, at least one inert filler, and at least one coloring agent.

A method of making up or caring for skin, lips or keratinous fibers comprising applying to said skin or keratinous fibers a structured composition containing at least one liquid fatty phase structured with at least one structuring polymer comprising a polymer skeleton comprising at least one

hydrocarbon-based repeating unit comprising at least one hetero atom and at least one inert filler.

A composition comprising at least one liquid fatty phase in said composition which comprises:

- 5 (i) at least one structuring polymer comprising:  
a polymer skeleton which comprises at least three hydrocarbon-based repeating units comprising at least one hetero atom; and  
(ii) at least one inert filler, with the proviso that said at least one inert filler is not silica or talc

- 10 A composition comprising at least one liquid fatty phase in said composition which comprises:

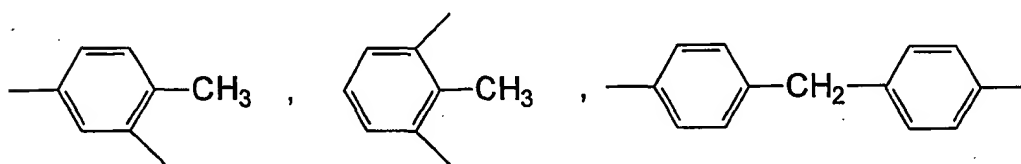
(i) at least one structuring polymer chosen from urea urethanes having the following formula:



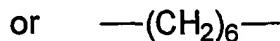
- 15 wherein R represents  $\text{C}_n\text{H}_{2n+1}-$ , wherein n represents an integer having a value greater than 22 or  $\text{C}_m\text{H}_{2m+1}(\text{OC}_p\text{H}_{2p})_r-$ , wherein m represents an integer having a value of greater than 18, p represents an integer having a value of from 2 to 4, and r represents an integer having a value of from 1 to 10.

R' represents:

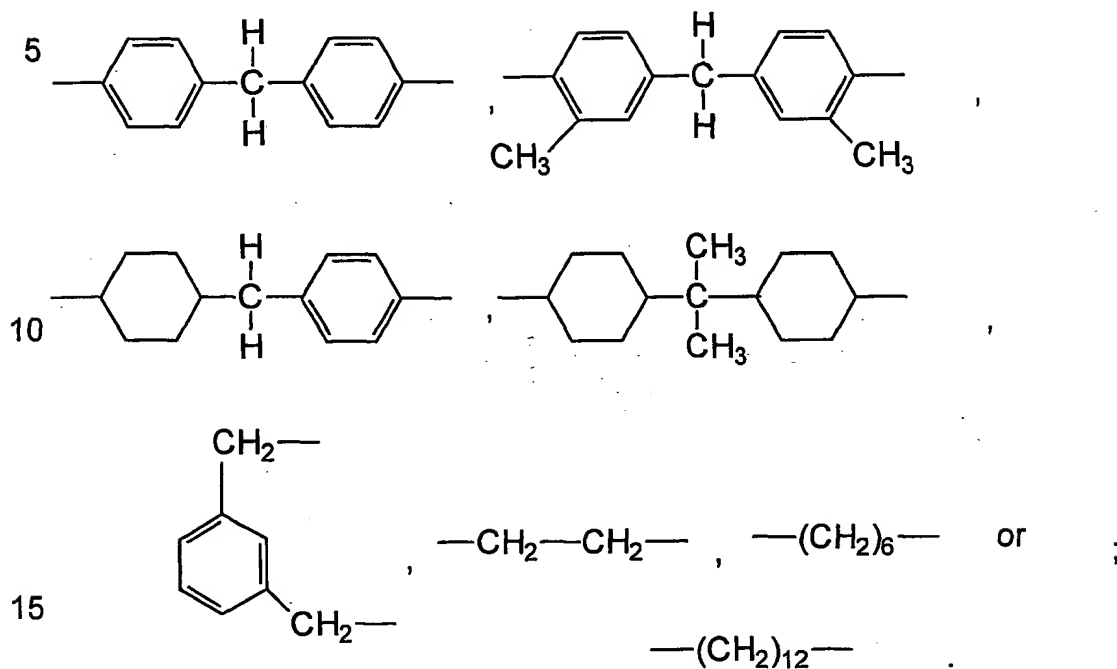
20



25



and R" represents:



(ii) at least one inert filler.

A composition comprising at least one liquid fatty phase which  
20 comprises:

(i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based  
repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler, with the proviso that said at least one inert  
25 filler is not acrylates copolymer, silica, talc, or a bentonite clay.

An anhydrous composition comprising at least one liquid fatty  
phase which comprises:

(i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based  
30 repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler, with the proviso that said at least one inert filler is not acrylates copolymer or stearylalkonium hectorite.

A composition comprising at least one liquid fatty phase which comprises:

- 5 (i) at least one structuring polymer, wherein said at least one structuring polymer is at least one polyamide polymer comprising:  
a polymer skeleton which comprises at least one amide repeating unit;  
and

- (ii) at least one inert filler with the proviso that said at least one inert  
10 filler is not acrylates copolymer, silica, talc, or a bentonite clay

The invention is illustrated in greater detail in the examples which follow. The amounts are given as percentages by mass.

#### **Example 1: Lipstick**

##### *Phase A*

- |    |                           |     |
|----|---------------------------|-----|
| 15 | • Uniclear 100            | 18% |
|    | • isononyl isononanoate   | 5%  |
|    | • diisostearyl malate     | 17% |
|    | • hydrogenated polybutene | 4%  |

##### 20 *Phase B*

- |  |                                     |     |
|--|-------------------------------------|-----|
|  | • hydrophobic silica (Aerosil R972) | 3%  |
|  | • hydrogenated polybutene           | 25% |
|  | • isononyl isononanoate             | 12% |

##### 25 *Phase C*

- |  |                           |    |
|--|---------------------------|----|
|  | • pigments                | 7% |
|  | • hydrogenated polybutene | 9% |

##### *Procedure*

- The Uniclear 100 and the oils of phase A were introduced into a  
30 heating vessel. The mixture was placed under magnetic stirring and then

heated in a first stage to 100°C (to liquefy the Uniclear). A mixture comprising the silica gel (phase B) prepared beforehand and of the ground pigmentary material (phase C), which was heated beforehand to 100°C and homogenized with stirring, was introduced into a heated mold ( $T^{\circ} = 45^{\circ}\text{C}$ ).

- 5 The product obtained was placed, after setting had started, in a freezer ( $T^{\circ} = -21^{\circ}\text{C}$ ) for 15 minutes.

a) Silica gel (phase B)

The gel was prepared, with stirring in a Rayneri stirrer at 60°C, using a hotplate, by introducing the silica portionwise into the oily mixture formed from

10	Hydrogenated polybutene	25 g
	Isononyl isononanoate	12 g
	TOTAL	40 g

b) Ground pigmentary material (phase C)

- 15 The pigments were mixed with the oil heated to 60°C; the mixture was milled 3 times in a three-roll mill.

The sticks of lipstick had a diameter of 8.1 mm and a hardness of  $77 \pm 10$  g, measured using a "cheese wire". These lipsticks were considered by testers as having good staying power and being non-greasy and glossy. This lipstick was stable and did not exude at room temperature or at 47°C, for  
20 2 months.

The lipstick obtained deposited a glossy film with good staying power. This lipstick was considered by testers as having good staying power and being glossy.

#### Examples 2 to 4: Cast foundations

- 25 Several foundations differing from each other in the nature of the filler, and having the composition below, were prepared:

*Phase A*

Uniclear 100	11%
Isononyl isononanoate	10%

*Phase B*

	Coated yellow iron oxide*	2.2%
	Coated red iron oxide*	0.5%
	Coated black iron oxide*	0.3%
5	Titanium oxide*	7%

*Phase C*

	Filler	10%
--	--------	-----

10 *Phase D*

	Isododecane	qs	100%
--	-------------	----	------

\*The coating is aluminium stearoylglutamate

*Procedure*

The Uniclear 100 was incorporated into the isononyl isononanoate,  
 15 with the aid of a Rayneri mixer for 10 min., in a heating vessel heated to  
 110°C. The stirring was continued until the Uniclear has fully dissolved  
 (phase A).

In parallel, a pigmentary phase was prepared by incorporating 30 g of  
 pigments (iron oxide + titanium oxide) into 8.8 g of isododecane, followed by  
 20 milling using a three-roll mill. This pigmentary phase (phase B) was then  
 introduced into phase A and the mixture was stirred until completely  
 homogeneous, for 30 min., at 110°C. Next, the temperature was lowered to  
 95°C and the volatile phase D was then added to the above mixture. After  
 stirring the resulting mixture for 15 min., the filler (phase C) was incorporated  
 25 and stirring of this mixture was then continued for 20 min. Next, the final  
 mixture obtained was cast in foundation molds preheated to 45°C and the  
 mixture was then left to cool to room temperature.

The fillers used were, respectively, silica beads (Tospearl 145 A)  
 (Example 2), Nylon particles (Example 3) and PMMA particles of 10 to 12 µm,



sold by Wacker under the reference Covabead LH-85® (Example 4). With the composition of Example 2, a slight phase separation was observed at room temperature after 1 month. With composition 3, good stability was obtained both at 4°C and room temperature (25°C) and at 45°C, after 1 month and even after 2 months, *i.e.*, no phase separation or exudation, although the feel of this composition was not particularly pleasant. With composition 4, good stability was obtained at 4°C, 25°C and 45°C, after 1 month and 2 months. This composition felt pleasant, non-greasy, light and fondant on the fingers and was easy to spread.

10        The composition of Example 4 was also compared with a commercially available transfer-resistant foundation, Teint Idole in stick form, containing conventional waxes, and no structuring polymer in the sense of the invention. These compositions were applied per half-face to 5 testers and per half-neck to 10 individuals, after applying a day cream to the face and the neck  
15        (Primordiale from Lancôme), followed by drying for 10 min. and wearing a collar made of fabric for 30 min. The extent of the deposit was assessed visually by an aesthetician. The transfer-resistance properties were graded from 0 to 7 with 0 corresponding to no deposit of foundation on the collar, and 7 corresponding to a sizeable deposit. Composition 4 according to the  
20        invention received an average score of 2.6, compared with 3 for the commercially available product, considered by the consumers as a very good transfer-resistant product in stick form. In particular, 5 testers considered that composition 4 had transfer-resistance properties that were superior to those of the commercially available product, and 3 other testers considered that  
25        composition 4 and the commercially available product had identical transfer-resistance properties.

Finally, these 2 compositions were considered as applying well, feeling soft, being comfortable and giving a natural and light make-up effect. The skin was made uniform and smooth. The make-up effect was homogeneous.

30        **Example 5: Cast foundation**

	• Isostearyl neopentanoate	qs	100%
	• Isononyl isononanoate		15%
	• Yellow iron oxide		2.1%
	• Yellow-brown iron oxide		1%
5	• Black iron oxide		0.3%
	• Titanium oxide (untreated anatase)		10.6%
	• Methyl p-hydroxybenzoate		0.2%
	• Talc (particle size 2 $\mu\text{m}$ )		8.3%
	• Kaolinite (hydrated aluminium silicate)		3%
10	• Nano-titanium oxide (particle size 2 nm) coated with PDMS		5%
	• Polyethylene wax MW <sup>**</sup> : 500		3.7%
	• Uniclear 100		7.4%
	• Hollow polymethyl methacrylate microspheres		4%
15	(particle size: 10 to 12 $\mu\text{m}$ )		
	• Polytetrafluoroethylene wax (particle size 8 $\mu\text{m}$ ), MW <sup>**</sup> : 75 000)		4%
	• Octyldodecanol		
	**MW: number-average molecular mass.		4.4%

20        This foundation had the same cosmetic properties as those of the above examples.

**What is claimed is:**

1. A composition comprising at least one liquid fatty phase which comprises:
  - (i) at least one structuring polymer comprising:
    - 5 a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and
    - (ii) at least one inert filler, with the proviso that said at least one inert filler is not acrylates copolymer, silica, talc, or a bentonite clay.
- 10 2. The composition according to claim 1, wherein said at least one structuring polymer further comprises at least one of:
  - at least one terminal fatty chain chosen from alkyl chains and alkenyl chains, wherein said at least one terminal fatty chain is bonded to said polymer skeleton via at least one linking group; and
  - at least one pendant fatty chain chosen from alkyl chains and alkenyl chains, wherein said at least one pendant fatty chain is bonded to said polymer skeleton via at least one linking group.
- 15 3. The composition according to claim 2, wherein said alkyl chains and said alkenyl chains each comprise at least four carbon atoms.
- 20 4. The composition according to claim 3, wherein said alkyl chains and said alkenyl chains each comprise from 8 to 120 carbon atoms.
5. The composition according to claim 4, wherein said alkyl chains and said alkenyl chains each comprise from 12 to 68 carbon atoms.
- 25 6. The composition according to claim 2, wherein said at least one linking group is chosen from single bonds and urea, urethane, thiourea, thiourethane, thioether, thioester, ester, ether and amine groups.
7. The composition according to claim 6, wherein said at least one linking group is an ester group present in a proportion ranging from 15% to 40% of the total number of all ester and hetero atom groups in the at least one structuring polymer.

8. The composition according to claim 7, wherein said at least one linking group is an ester group present in a proportion ranging from 20% to 35% of the total number of all ester and hetero atom groups in the at least one structuring polymer.
- 5 9. The composition according to claim 6, wherein said at least one linking group is chosen from urea, ester, and amine groups.
10. The composition according to claim 9, wherein said at least one linking group is chosen from ester and amine groups.
- 10 11. The composition according to claim 2, wherein said at least one terminal fatty chain is functionalized.
12. The composition according to claim 2, wherein said at least one pendant fatty chain is functionalized.
- 15 13. The composition according to claim 2, wherein in said at least one structuring polymer, the percentage of the total number of fatty chains ranges from 40% to 98% relative to the total number of all repeating units and fatty chains in the at least one structuring polymer.
- 20 14. The composition according to claim 13, wherein in said at least one structuring polymer, the percentage of the total number of fatty chains ranges from 50% to 95% relative to the total number of all repeating units and fatty chains in the at least one structuring polymer.
- 25 15. The composition according to claim 1, wherein said at least one structuring polymer has a weight-average molecular mass of less than 100,000.
16. The composition according to claim 15, wherein said at least one structuring polymer has a weight-average molecular mass of less than 50,000.
17. The composition according to claim 16, wherein said at least one structuring polymer has a weight-average molecular mass ranging from 1000 to 30,000.

18. The composition according to claim 17, wherein said at least one structuring polymer has a weight-average molecular mass ranging from 2000 to 20,000.

19. The composition according to claim 18, wherein said at least  
5 one structuring polymer has a weight-average molecular mass ranging from 2000 to 10,000.

20. The composition according to claim 1, wherein said at least one hydrocarbon based repeating unit comprises from 2 to 80 carbon atoms.

21. The composition according to claim 20, wherein said at least  
10 one hydrocarbon based repeating unit comprises from 2 to 60 carbon atoms.

22. The composition according to claim 1, wherein said at least one hydrocarbon based repeating unit is chosen from saturated and unsaturated hydrocarbon-based units which are chosen from linear hydrocarbon-based repeating units, branched hydrocarbon-based repeating units and cyclic  
15 hydrocarbon-based repeating units.

23. The composition according to claim 1, wherein said at least one hetero atom of said at least one hydrocarbon-based repeating unit is chosen from nitrogen, sulphur, and phosphorus.

24. The composition according to claim 23, wherein said at least  
20 one hetero atom is a nitrogen atom.

25. The composition according to claim 23, wherein said at least one hetero atom is combined with at least one atom chosen from oxygen and carbon to form a hetero atom group.

26. The composition according to claim 25, wherein said at least  
25 one hetero atom group further comprises a carbonyl group.

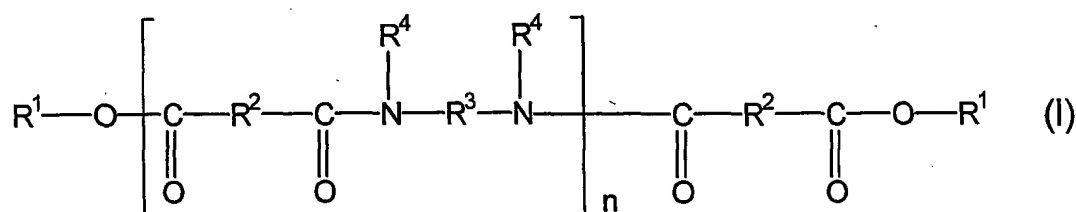
27. The composition according to claim 25, wherein said at least one hetero atom group is chosen from amide groups, carbamate groups, and urea groups.

28. The composition according to claim 27, wherein said at least one hetero atom group is an amide group and said polymer skeleton is a polyamide skeleton.

29. The composition according to claim 27, wherein said at least one hetero atom group is chosen from carbamate groups and urea groups and said polymer skeleton is chosen from polyurethane skeletons, polyurea skeletons, and polyurethane-polyurea skeletons.

30. The composition according to claim 1, wherein said at least one structuring polymer is chosen from polyamide polymers of formula (I):

10



15

in which:

20 - n is an integer which represents the number of amide units such that the number of ester groups present in said at least one polyamide polymer ranges from 10% to 50% of the total number of all ester groups and all amide groups comprised in said at least one polyamide polymer;

- R<sup>1</sup>, which are identical or different, are each chosen from alkyl groups comprising at least 4 carbon atoms and alkenyl groups comprising at least 4 carbon atoms;
  - R<sup>2</sup>, which are identical or different, are each chosen from C<sub>4</sub> to C<sub>42</sub>
  - 5 hydrocarbon-based groups with the proviso that at least 50% of all R<sup>2</sup> are chosen from C<sub>30</sub> to C<sub>42</sub> hydrocarbon-based groups;
  - R<sup>3</sup>, which are identical or different, are each chosen from organic groups comprising atoms chosen from carbon atoms, hydrogen atoms, oxygen atoms and nitrogen atoms with the proviso that R<sup>3</sup> comprises at least 2 carbon
  - 10 atoms; and
  - R<sup>4</sup>, which are identical or different, are each chosen from hydrogen atoms, C<sub>1</sub> to C<sub>10</sub> alkyl groups and a direct bond to at least one group chosen from R<sup>3</sup> and another R<sup>4</sup> such that when said at least one group is chosen from another R<sup>4</sup>, the nitrogen atom to which both R<sup>3</sup> and R<sup>4</sup> are bonded forms part
  - 15 of a heterocyclic structure defined in part by R<sup>4</sup>-N-R<sup>3</sup>, with the proviso that at least 50% of all R<sup>4</sup> are chosen from hydrogen atoms.
31. The composition according to claim 30, wherein in said formula (I), n is an integer ranging from 1 to 5.
32. The composition according to claim 31, wherein in said formula
- 20 (I), n is an integer ranging from 3 to 5.
33. The composition according to claim 30, wherein in said formula (I), said alkyl groups of R<sup>1</sup> and said alkenyl groups of R<sup>1</sup> each independently comprise from 4 to 24 carbon atoms.
34. The composition according to claim 33, wherein in said formula
- 25 (I), R<sup>1</sup>, which are identical or different, are each chosen from C<sub>12</sub> to C<sub>22</sub> alkyl groups.
35. The composition according to claim 34, wherein in said formula (I), R<sup>1</sup>, which are identical or different, are each chosen from C<sub>16</sub> to C<sub>22</sub> alkyl groups.

36. The composition according to claim 30, wherein in said formula (I),  $R^2$ , which are identical or different, are each chosen from  $C_{10}$  to  $C_{42}$  hydrocarbon based groups with the proviso that at least 50% of all  $R^2$  are chosen from  $C_{30}$  to  $C_{42}$  hydrocarbon based groups.

5 37. The composition according to claim 36, wherein at least 75% of all  $R^2$ , which are identical or different, are chosen from  $C_{30}$  to  $C_{42}$  hydrocarbon based groups.

38. The composition according to claim 30, wherein in said formula (I),  $R^3$ , which can be identical or different, are each chosen from  $C_2$  to  $C_{36}$  hydrocarbon-based groups and polyoxyalkylene groups.

39. The composition according to claim 38, wherein  $R^3$ , which can be identical or different, are each chosen from  $C_2$  to  $C_{12}$  hydrocarbon-based groups.

40. The composition according to claim 39, wherein in said formula (I),  $R^4$ , which can be identical or different, are each chosen from hydrogen atoms.

41. The composition according to claim 30, wherein said at least one polymer of formula (I) is in the form of a mixture of polymers, wherein said mixture optionally also comprises a compound of formula (I) wherein n is equal to zero.

42. The composition according to claim 1, wherein said at least one structuring polymer has a softening point greater than 50°C.

43. The composition according to claim 42, wherein said at least one structuring polymer has a softening point ranging from 65°C to 190°C.

25 44. The composition according to claim 43, wherein said at least one structuring polymer has a softening point ranging from 70°C to 130°C.

45. The composition according to claim 44, wherein said at least one structuring polymer has a softening point ranging from 80°C to 105°C.



46. The composition according to claim 1, wherein said at least one structuring polymer is present in the composition in an amount ranging from 0.5% to 80% by weight relative to the total weight of the composition.

47. The composition according to claim 46, wherein said at least  
5 one structuring polymer is present in the composition in an amount ranging from 2% to 60% by weight relative to the total weight of the composition.

48. The composition according to claim 47, wherein said at least one structuring polymer is present in the composition in an amount ranging from 5% to 40% by weight relative to the total weight of the composition.

10 49. The composition according to claim 1, wherein said composition has a hardness ranging from 30 to 300 g.

50. The composition according to claim 49, wherein said composition has a hardness ranging from 30 to 250 g.

15 51. The composition according to claim 50, wherein said composition has a hardness ranging from 30 to 200 g.

52. The composition according to claim 1, wherein said at least one liquid fatty phase of the composition further comprises at least one oil.

53. The composition according to claim 52, wherein said at least one oil is chosen from at least one polar oil and at least one apolar oil.

20 54. The composition according to claim 53, wherein said at least one polar oil is chosen from:

- hydrocarbon-based plant oils with a high content of triglycerides comprising fatty acid esters of glycerol in which the fatty acids comprise chains having from 4 to 24 carbon atoms, said chains possibly being chosen from linear and
- 25 branched, and saturated and unsaturated chains;
- synthetic oils or esters of formula  $R_5COOR_6$  in which  $R_5$  is chosen from linear and branched fatty acid residues comprising from 1 to 40 carbon atoms and  $R_5 + R_6 \geq 10$ ;
- synthetic ethers comprising from 10 to 40 carbon atoms;

30 -  $C_8$  to  $C_{26}$  fatty alcohols; and

- C<sub>8</sub> to C<sub>26</sub> fatty acids.

55. The composition according to claim 53, wherein said at least one apolar oil is chosen from:

- silicone oils chosen from volatile and non-volatile, linear and cyclic
- 5 polydimethylsiloxanes that are liquid at room temperature;
- polydimethylsiloxanes comprising alkyl or alkoxy groups which are pendant and/or at the end of the silicone chain, the groups each comprising from 2 to 24 carbon atoms;
- phenylsilicones; and
- 10 - hydrocarbons chosen from linear and branched, volatile and non-volatile hydrocarbons of synthetic and mineral origin.

56. The composition according to claim 1, wherein said at least one liquid fatty phase further comprises at least one non-volatile oil.

57. The composition according to claim 56, wherein said at least
- 15 one non-volatile oil is chosen from hydrocarbon-based oils of mineral, plant and synthetic origin, synthetic esters and ethers, and silicone oils.

58. The composition according to claim 1, wherein said at least one liquid fatty phase is present in an amount ranging from 1% to 99% by weight relative to the total weight of the composition.

- 20 59. The composition according to claim 58, wherein said at least one liquid fatty phase is present in an amount ranging from 5% to 95.5% by weight relative to the total weight of the composition.

60. The composition according to claim 59, wherein said at least one liquid fatty phase is present in an amount ranging from 10% to 80% by

25 weight relative to the total weight of the composition.

61. The composition according to claim 60, wherein said at least one liquid fatty phase is present in an amount ranging from 20% to 75% by weight relative to the total weight of the composition.

62. The composition according to claim 1, wherein said at least one

30 liquid fatty phase comprises at least one volatile solvent chosen from

hydrocarbon-based solvents, fluoro solvents, and silicone solvents optionally comprising at least one group chosen from alkyl and alkoxy groups that are pendant and/or at the end of a silicone chain.

63. The composition according to claim 62, wherein said at least  
5 one volatile solvent is present in an amount up to 95.5% relative to the total weight of the composition.

64. The composition according to claim 63, wherein said at least one volatile solvent is present in an amount ranging from 2% to 75% relative to the total weight of the composition.

10 65. The composition according to claim 64, wherein said at least one volatile solvent is present in an amount ranging from 10% to 45% relative to the total weight of the composition.

66. The composition according to claim 62, wherein said at least one volatile solvent is present in an amount up to 97.5% relative to the total  
15 weight of the composition.

67. The composition according to claim 66, wherein said at least one volatile solvent is present in an amount ranging from 1% to 75% relative to the total weight of the composition.

68. The composition according to claim 67, wherein said at least  
20 one volatile solvent is present in an amount ranging from 10% to 60% relative to the total weight of the composition.

69. The composition according to claim 1, wherein the composition is in a form chosen from a fluid gel, rigid gel, fluid simple emulsion, rigid simple emulsion, fluid multiple emulsion, and rigid multiple emulsion.

25 70. The composition according to claim 1, wherein said composition is a solid.

71. The composition according to claim 70, wherein said composition is a solid chosen from molded and poured sticks.

72. The composition according to claim 1, further

comprising at least one amphiphilic compound that is liquid and non-volatile at room temperature and has a hydrophilic/lipophilic balance value of less than 12.

73. The composition according to claim 72, wherein said at least  
5 one amphiphilic compound comprises a lipophilic part linked to a polar part, the lipophilic part comprising a carbon-based chain comprising at least 8 carbon atoms.

74. The composition according to claim 72, wherein said at least  
10 one amphiphilic compound is present in an amount ranging from 0.1% to 35% by weight relative to the total weight of the composition.

75. The composition according to claim 74, wherein said at least  
one amphiphilic compound is present in an amount ranging from 1% to 20% by weight relative to the total weight of the composition.

76. The composition according to claim 75, wherein said at least  
15 one amphiphilic compound is present in an amount ranging from 1% to 15% by weight relative to the total weight of the composition.

77. The composition according to claim 1, further  
comprising at least one additional additive chosen from antioxidants,  
essential oils, preserving agents, fragrances, fillers, waxes, fatty compounds  
20 that are pasty at room temperature, neutralizing agents, gums, liposoluble polymers and polymers that are dispersible in a lipophilic medium, cosmetic and dermatological active agents, dispersants, and an aqueous phase comprising water that is optionally thickened or gelled with an aqueous-phase thickener or gelling agent and optionally water-miscible compounds.

25 78. The composition according to claim 1, further comprising at least one coloring agent.

79. The composition according to claim 78, wherein said at least  
one coloring agent is chosen from lipophilic dyes, hydrophilic dyes, pigments and nacles.

30 80. The composition according to claim 78, wherein

said at least one coloring agent is present in a proportion of from 0.01% to 50% relative to the total weight of the composition.

81. The composition according to claim 1, wherein said composition is in the form of a rigid gel.

5 82. The composition according to claim 1, wherein said composition is in the form of a stick.

83. The composition according to claim 1, wherein said composition further comprises at least one wax.

84. The composition according to claim 83, wherein  
10 said at least one wax is chosen from beeswax, carnauba wax, candelilla wax, ouricury wax, Japan wax, cork fibre wax, sugar cane wax, paraffin wax, lignite wax, microcrystalline waxes, lanolin wax, montan wax, ozokerites and hydrogenated oils, polyethylene waxes, waxes obtained by Fischer-Tropsch synthesis, fatty acid esters and glycerides that are solid at 40°C, and silicone  
15 waxes.

85. The composition according to claim 1, wherein said at least one inert filler is chosen from mineral and organic fillers which are chosen from lamellar, spherical and oblong fillers.

86. The composition according to claim 1, wherein said at least one  
20 inert filler is chosen from talc, mica, silica, kaolin, polyamide powders, poly- $\beta$ -alanine powder, polyethylene powder, acrylic polymer powder, acrylic acid copolymer powder, polytetrafluoroethylene powders, lauroyllysine, boron nitride, starch, hollow polymer microspheres, hollow polymer microspheres, precipitated calcium carbonate, magnesium carbonate, magnesium  
25 hydrocarbonate, hydroxyapatite, hollow silica microspheres, glass and ceramic microcapsules. and polyester particles.

87. The composition according to claim 86, wherein said at least one inert filler is surface treated.

88. The composition according to claim 1, wherein said at least one

inert filler is chosen from polymethyl methacrylate powder and polyvinylidene chloride/acrylonitrile microspheres,

89. The composition according to claim 1, wherein said at least one inert filler is chosen from polyamide powder, acrylic polymer powder, and  
5 acrylic acid copolymer powder.

90. The composition according to claim 1, wherein said at least one inert filler is present in said composition in an amount ranging from 0.1% to 40% relative to the weight of the total composition.

91. The composition according to claim 90, wherein said at least  
10 one inert filler is present in said composition in an amount ranging from 2% to 30% relative to the weight of the total composition.

92. The composition according to claim 91, wherein said at least one inert filler is present in said composition in an amount ranging from 5% to 20% relative to the weight of the total composition.

15 93. An anhydrous composition comprising at least one liquid fatty phase which comprises:

(i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and

20 (ii) at least one inert filler, with the proviso that said at least one inert filler is not acrylates copolymer or stearylalkonium hectorite.

94. The anhydrous composition according to claim 3, wherein said at least one structuring polymer further comprises at least one of:

at least one terminal fatty chain chosen from alkyl chains and alkenyl  
25 chains, wherein said at least one terminal fatty chain is bonded to said polymer skeleton via at least one linking group; and

at least one pendant fatty chain chosen from alkyl chains and alkenyl chains, wherein said at least one pendant fatty chain is bonded to said polymer skeleton via at least one linking group.

95 The anhydrous composition according to claim 94, wherein said alkyl chains and said alkenyl chains each comprise at least four carbon atoms.

96 The anhydrous composition according to claim 95, wherein said  
5 alkyl chains and said alkenyl chains each comprise from 8 to 120 carbon atoms.

97. The anhydrous composition according to claim 96, wherein said alkyl chains and said alkenyl chains each comprise from 12 to 68 carbon atoms.

10 98. The anhydrous composition according to claim 94, wherein said at least one linking group is chosen from single bonds and urea, urethane, thiourea, thiourethane, thioether, thioester, ester, ether and amine groups.

99. The anhydrous composition according to claim 98, wherein said at least one linking group is an ester group present in a proportion ranging  
15 from 15% to 40% of the total number of all ester and hetero atom groups in the at least one structuring polymer.

100. The anhydrous composition according to claim 99, wherein said at least one linking group is an ester group present in a proportion ranging from 20% to 35% of the total number of all ester and hetero atom groups in  
20 the at least one structuring polymer.

101. The anhydrous composition according to claim 98, wherein said at least one linking group is chosen from urea, ester, and amine groups.

102. The anhydrous composition according to claim 101, wherein said at least one linking group is chosen from ester and amine groups.

25 103. The anhydrous composition according to claim 94, wherein said at least one terminal fatty chain is functionalized.

104 The anhydrous composition according to claim 94, wherein said at least one pendant fatty chain is functionalized.

105. The anhydrous composition according to claim 94, wherein in said at least one structuring polymer, the percentage of the total number of fatty chains ranges from 40% to 98% relative to the total number of all repeating units and fatty chains in the at least one structuring polymer.

5        106. The anhydrous composition according to claim 105, wherein in said at least one structuring polymer, the percentage of the total number of fatty chains ranges from 50% to 95% relative to the total number of all repeating units and fatty chains in the at least one structuring polymer.

107. The anhydrous composition according to claim 93, wherein said  
10 at least one structuring polymer has a weight-average molecular mass of less than 100,000.

108 The anhydrous composition according to claim 107, wherein said at least one structuring polymer has a weight-average molecular mass of less than 50,000.

15        109. The anhydrous composition according to claim 108, wherein said at least one structuring polymer has a weight-average molecular mass ranging from 1000 to 30,000.

110. The anhydrous composition according to claim 109, wherein said at least one structuring polymer has a weight-average molecular mass  
20 ranging from 2000 to 20,000.

111 The anhydrous composition according to claim 110, wherein said at least one structuring polymer has a weight-average molecular mass ranging from 2000 to 10,000.

112. The anhydrous composition according to claim 93, wherein said  
25 at least one hydrocarbon based repeating unit comprises from 2 to 80 carbon atoms.

113. The anhydrous composition according to claim 112, wherein said at least one hydrocarbon based repeating unit comprises from 2 to 60 carbon atoms.



114. The anhydrous composition according to claim 93, wherein said at least one hydrocarbon based repeating unit is chosen from saturated and unsaturated hydrocarbon-based units which are chosen from linear hydrocarbon-based repeating units, branched hydrocarbon-based repeating units and cyclic hydrocarbon-based repeating units.

115. The anhydrous composition according to claim 93, wherein said at least one hetero atom of said at least one hydrocarbon-based repeating unit is chosen from nitrogen, sulphur, and phosphorus.

116. The anhydrous composition according to claim 115, wherein said at least one hetero atom is a nitrogen atom.

117. The anhydrous composition according to claim 115, wherein said at least one hetero atom is combined with at least one atom chosen from oxygen and carbon to form a hetero atom group.

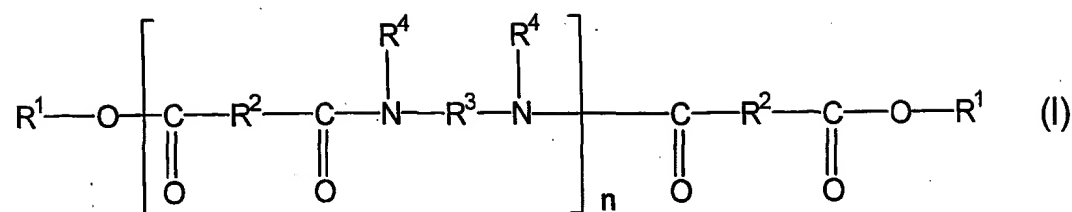
118. The anhydrous composition according to claim 117, wherein said at least one hetero atom group further comprises a carbonyl group.

119. The anhydrous composition according to claim 117, wherein said at least one hetero atom group is chosen from amide groups, carbamate groups, and urea groups.

120. The anhydrous composition according to claim 119, wherein said at least one hetero atom group is an amide group and said polymer skeleton is a polyamide skeleton.

121. The anhydrous composition according to claim 119, wherein said at least one hetero atom group is chosen from carbamate groups and urea groups and said polymer skeleton is chosen from polyurethane skeletons, polyurea skeletons, and polyurethane-polyurea skeletons.

122. The anhydrous composition according to claim 93, wherein said at least one structuring polymer is chosen from polyamide polymers of formula (I):



5

in which:

- n is an integer which represents the number of amide units such that the number of ester groups present in said at least one polyamide polymer ranges from 10% to 50% of the total number of all ester groups and all amide groups comprised in said at least one polyamide polymer;
- R<sup>1</sup>, which are identical or different, are each chosen from alkyl groups comprising at least 4 carbon atoms and alkenyl groups comprising at least 4 carbon atoms;
- 15 - R<sup>2</sup>, which are identical or different, are each chosen from C<sub>4</sub> to C<sub>42</sub> hydrocarbon-based groups with the proviso that at least 50% of all R<sup>2</sup> are chosen from C<sub>30</sub> to C<sub>42</sub> hydrocarbon-based groups;
- R<sup>3</sup>, which are identical or different, are each chosen from organic groups comprising atoms chosen from carbon atoms, hydrogen atoms, oxygen atoms and nitrogen atoms with the proviso that R<sup>3</sup> comprises at least 2 carbon atoms; and
- 20 - R<sup>4</sup>, which are identical or different, are each chosen from hydrogen atoms, C<sub>1</sub> to C<sub>10</sub> alkyl groups and a direct bond to at least one group chosen from R<sup>3</sup> and another R<sup>4</sup> such that when said at least one group is chosen from another R<sup>4</sup>, the nitrogen atom to which both R<sup>3</sup> and R<sup>4</sup> are bonded forms part
- 25

of a heterocyclic structure defined in part by  $R^4-N-R^3$ , with the proviso that at least 50% of all  $R^4$  are chosen from hydrogen atoms.

123. The anhydrous composition according to claim 122, wherein in said formula (I),  $n$  is an integer ranging from 1 to 5.

5 124. The anhydrous composition according to claim 123, wherein in said formula (I),  $n$  is an integer ranging from 3 to 5.

125 The anhydrous composition according to claim 122, wherein in said formula (I), said alkyl groups of  $R^1$  and said alkenyl groups of  $R^1$  each independently comprise from 4 to 24 carbon atoms.

10 126. The anhydrous composition according to claim 125, wherein in said formula (I),  $R^1$ , which are identical or different, are each chosen from  $C_{12}$  to  $C_{22}$  alkyl groups.

127. The anhydrous composition according to claim 126, wherein in said formula (I),  $R^1$ , which are identical or different, are each chosen from  $C_{16}$   
15 to  $C_{22}$  alkyl groups.

128. The anhydrous composition according to claim 122, wherein in said formula (I),  $R^2$ , which are identical or different, are each chosen from  $C_{10}$  to  $C_{42}$  hydrocarbon based groups with the proviso that at least 50% of all  $R^2$  are chosen from  $C_{30}$  to  $C_{42}$  hydrocarbon based groups.

20 129. The anhydrous composition according to claim 128, wherein at least 75% of all  $R^2$ , which are identical or different, are chosen from  $C_{30}$  to  $C_{42}$  hydrocarbon based groups.

130. The anhydrous composition according to claim 122, wherein in said formula (I),  $R^3$ , which can be identical or different, are each chosen from  
25  $C_2$  to  $C_{36}$  hydrocarbon-based groups and polyoxyalkylene groups.

131. The anhydrous composition according to claim 130, wherein  $R^3$ , which can be identical or different, are each chosen from  $C_2$  to  $C_{12}$  hydrocarbon-based groups.

132. The anhydrous composition according to claim 131, wherein in said formula (I),  $R^4$ , which can be identical or different, are each chosen from hydrogen atoms.

5        133. The anhydrous composition according to claim 122, wherein said at least one polymer of formula (I) is in the form of a mixture of polymers, wherein said mixture optionally also comprises a compound of formula (I) wherein n is equal to zero.

134. The anhydrous composition according to claim 93, wherein said  
10 at least one structuring polymer has a softening point greater than 50°C.

135. The anhydrous composition according to claim 134, wherein said at least one structuring polymer has a softening point ranging from 65°C to 190°C.

136. The anhydrous composition according to claim 135, wherein  
15 said at least one structuring polymer has a softening point ranging from 70°C to 130°C.

137. The anhydrous composition according to claim 136, wherein said at least one structuring polymer has a softening point ranging from 80°C to 105°C.

20        138. The anhydrous composition according to claim 93, wherein said at least one structuring polymer is present in the anhydrous composition in an amount ranging from 0.5% to 80% by weight relative to the total weight of the composition.

139. The anhydrous composition according to claim 138, wherein  
25 said at least one structuring polymer is present in the anhydrous composition in an amount ranging from 2% to 60% by weight relative to the total weight of the composition.

140. The anhydrous composition according to claim 139, wherein said at least one structuring polymer is present in the anhydrous composition.

in an amount ranging from 5% to 40% by weight relative to the total weight of the composition.

141. The anhydrous composition according to claim 93, wherein said anhydrous composition has a hardness ranging from 30 to 300 g.

5 142. The anhydrous composition according to claim 141, wherein said anhydrous composition has a hardness ranging from 30 to 250 g.

143. The anhydrous composition according to claim 142, wherein said anhydrous composition has a hardness ranging from 30 to 200 g.

144. The anhydrous composition according to claim 93, wherein said  
10 at least one liquid fatty phase of the anhydrous composition further comprises at least one oil.

145. The anhydrous composition according to claim 144, wherein said at least one oil is chosen from at least one polar oil and at least one apolar oil.

15 146. The anhydrous composition according to claim 145, wherein said at least one polar oil is chosen from:

- hydrocarbon-based plant oils with a high content of triglycerides comprising fatty acid esters of glycerol in which the fatty acids comprise chains having from 4 to 24 carbon atoms, said chains possibly being chosen from linear and  
20 branched, and saturated and unsaturated chains;
- synthetic oils or esters of formula  $R_5COOR_6$  in which  $R_5$  is chosen from linear and branched fatty acid residues comprising from 1 to 40 carbon atoms and  $R_5 + R_6 \geq 10$ ;
- synthetic ethers comprising from 10 to 40 carbon atoms;
- 25 -  $C_8$  to  $C_{26}$  fatty alcohols; and
- $C_8$  to  $C_{26}$  fatty acids.

147. The anhydrous composition according to claim 145, wherein said at least one apolar oil is chosen from:

- silicone oils chosen from volatile and non-volatile, linear and cyclic  
30 polydimethylsiloxanes that are liquid at room temperature;

- polydimethylsiloxanes comprising alkyl or alkoxy groups which are pendant and/or at the end of the silicone chain, the groups each comprising from 2 to 24 carbon atoms;
  - phenylsilicones; and
- 5    - hydrocarbons chosen from linear and branched, volatile and non-volatile hydrocarbons of synthetic and mineral origin.

148. The anhydrous composition according to claim 93, wherein said at least one liquid fatty phase further comprises at least one non-volatile oil.

- 10    149. The anhydrous composition according to claim 148, wherein said at least one non-volatile oil is chosen from hydrocarbon-based oils of mineral, plant and synthetic origin, synthetic esters and ethers, and silicone oils.

150. The anhydrous composition according to claim 93, wherein said at least one liquid fatty phase is present in an amount ranging from 1% to 15    99% by weight relative to the total weight of the composition.

151. The anhydrous composition according to claim 150, wherein said at least one liquid fatty phase is present in an amount ranging from 5% to 95.5% by weight relative to the total weight of the composition.

152. The anhydrous composition according to claim 151, wherein 20    said at least one liquid fatty phase is present in an amount ranging from 10% to 80% by weight relative to the total weight of the composition.

153. The anhydrous composition according to claim 152, wherein said at least one liquid fatty phase is present in an amount ranging from 20% to 75% by weight relative to the total weight of the composition.

- 25    154. The anhydrous composition according to claim 93, wherein said at least one liquid fatty phase comprises at least one volatile solvent chosen from hydrocarbon-based solvents, fluoro solvents, and silicone solvents optionally comprising at least one group chosen from alkyl and alkoxy groups that are pendant and/or at the end of a silicone chain.

155. The anhydrous composition according to claim 154, wherein said at least one volatile solvent is present in an amount up to 95.5% relative to the total weight of the composition.

156. The anhydrous composition according to claim 155, wherein  
5 said at least one volatile solvent is present in an amount ranging from 2% to 75% relative to the total weight of the composition.

157. The anhydrous composition according to claim 156, wherein said at least one volatile solvent is present in an amount ranging from 10% to 45% relative to the total weight of the composition.

10 158. The anhydrous composition according to claim 154, wherein said at least one volatile solvent is present in an amount up to 97.5% relative to the total weight of the composition.

159. The anhydrous composition according to claim 158, wherein said at least one volatile solvent is present in an amount ranging from 1% to  
15 75% relative to the total weight of the composition.

160. The anhydrous composition according to claim 159, wherein said at least one volatile solvent is present in an amount ranging from 10% to 60% relative to the total weight of the composition.

161. The anhydrous composition according to claim 93, wherein the  
20 composition is in a form chosen from a fluid gel, rigid gel, fluid simple emulsion, rigid simple emulsion, fluid multiple emulsion, and rigid multiple emulsion.

162. The anhydrous composition according to claim 93, wherein said anhydrous composition a solid.

25 163. The anhydrous composition according to claim 162, wherein said anhydrous composition a solid chosen from molded and poured sticks.

164. The anhydrous composition according to claim 93, further

comprising at least one amphiphilic compound that is liquid and non-volatile at room temperature and has a hydrophilic/lipophilic balance value of less than 12.

165. The anhydrous composition according to claim 164, wherein  
5 said at least one amphiphilic compound comprises a lipophilic part linked to a polar part, the lipophilic part comprising a carbon-based chain comprising at least 8 carbon atoms.

166. The anhydrous composition according to claim 164, wherein  
said at least one amphiphilic compound is present in an amount ranging from  
10 0.1% to 35% by weight relative to the total weight of the composition.

167. The anhydrous composition according to claim 166, wherein  
said at least one amphiphilic compound is present in an amount ranging from  
1% to 20% by weight relative to the total weight of the composition.

168. The anhydrous composition according to claim 167, wherein  
15 said at least one amphiphilic compound is present in an amount ranging from 1% to 15% by weight relative to the total weight of the composition.

169. The anhydrous composition according to claim 93, further  
comprising at least one additional additive chosen from antioxidants,  
essential oils, preserving agents, fragrances, fillers, waxes, fatty compounds  
20 that are pasty at room temperature, neutralizing agents, gums, liposoluble polymers and polymers that are dispersible in a lipophilic medium, cosmetic and dermatological active agents, dispersants, and an aqueous phase comprising water that is optionally thickened or gelled with an aqueous-phase thickener or gelling agent and optionally water-miscible compounds.

25 170. The anhydrous composition according to claim 93, further comprising at least one coloring agent.

171. The anhydrous composition according to claim 170, wherein  
said at least one coloring agent is chosen from lipophilic dyes, hydrophilic  
dyes, pigments and nacres.

30 172. The anhydrous composition according to claim 170, wherein



said at least one coloring agent is present in a proportion of from 0.01% to 50% relative to the total weight of the composition.

173. The anhydrous composition according to claim 93, wherein said anhydrous composition is in the form of a rigid gel.

5 174. The anhydrous composition according to claim 93, wherein said anhydrous composition is in the form of a stick.

175. The anhydrous composition according to claim 93, wherein said anhydrous composition further comprises at least one wax.

176. The anhydrous composition according to claim 175, wherein  
10 said at least one wax is chosen from beeswax, carnauba wax, candelilla wax, ouricury wax, Japan wax, cork fibre wax, sugar cane wax, paraffin wax, lignite wax, microcrystalline waxes, lanolin wax, montan wax, ozokerites and hydrogenated oils, polyethylene waxes, waxes obtained by Fischer-Tropsch synthesis, fatty acid esters and glycerides that are solid at 40°C, and silicone  
15 waxes.

177. The anhydrous composition according to claim 93, wherein said at least one inert filler is chosen from mineral and organic fillers which are chosen from lamellar, spherical and oblong fillers.

178. The anhydrous composition according to claim 93, wherein said  
20 at least one inert filler is chosen from talc, mica, silica, kaolin, polyamide powders, poly-β-alanine powder, polyethylene powder, acrylic polymer powder, acrylic acid copolymer powder, polytetrafluoroethylene powders, lauroyllysine, boron nitride, starch, hollow polymer microspheres, hollow polymer microspheres, precipitated calcium carbonate, magnesium  
25 carbonate, magnesium hydrocarbonate, hydroxyapatite, hollow silica microspheres, glass and ceramic microcapsules. and polyester particles.

179. The anhydrous composition according to claim 178, wherein said at least one inert filler is surface treated.

180. The anhydrous composition according to claim 93, wherein said

at least one inert filler is chosen from polymethyl methacrylate powder and polyvinylidene chloride/acrylonitrile microspheres,

181. The anhydrous composition according to claim 93, wherein said at least one inert filler is chosen from polyamide powder, acrylic polymer  
5 powder, and acrylic acid copolymer powder.

182. The anhydrous composition according to claim 93, wherein said at least one inert filler is present in said anhydrous composition in an amount ranging from 0.1% to 40% relative to the weight of the total composition.

183. The anhydrous composition according to claim 182, wherein  
10 said at least one inert filler is present in said anhydrous composition in an amount ranging from 2% to 30% relative to the weight of the total composition.

184. The anhydrous composition according to claim 183, wherein said at least one inert filler is present in said composition in an amount  
15 ranging from 5% to 20% relative to the weight of the total composition.

185. A composition comprising at least one liquid fatty phase which comprises:

(i) at least one structuring polymer, wherein said at least one structuring polymer is at least one polyamide polymer comprising:  
20 a polymer skeleton which comprises at least one amide repeating unit;  
and

(ii) at least one inert filler with the proviso that said at least one inert filler is not acrylates copolymer, silica, talc, or a bentonite clay.

186. The composition according to claim 185, wherein said at least  
25 one polyamide polymer is chosen from polymers resulting from at least one polycondensation reaction between at least one acid chosen from dicarboxylic acids comprising at least 32 carbon atoms and at least one amine chosen from diamines comprising at least 2 carbon atoms and triamines comprising at least 2 carbon atoms.

187. The composition according to claim 186, wherein said dicarboxylic acids comprise from 32 to 44 carbon atoms and said at least one amine comprises from 2 to 36 carbon atoms.

188. The composition according to claim 187, wherein said  
5 dicarboxylic acids are chosen from dimers of at least one fatty acid comprising at least 16 carbon atoms.

189. The composition according to claim 188, wherein said at least one fatty acid is chosen from oleic acid, linoleic acid and linolenic acid.

190. The composition according to claim 186, wherein said diamines  
10 are chosen from ethylenediamine, hexylenediamine, hexamethylenediamine, and phenylenediamine and said triamines are chosen from ethylenetriamine.

191. The composition according to claim 185, wherein said at least one polyamide polymer is chosen from polymers comprising at least one terminal carboxylic acid group.

15 192. The composition according to claim 191, wherein said at least one terminal carboxylic acid group is esterified with at least one alcohol chosen from monoalcohols comprising at least 4 carbon atoms.

193. The composition according to claim 185, wherein said at least one polyamide polymer is chosen from:

- 20 - polymers chosen from mixtures of copolymers derived from monomers of (i) C<sub>36</sub> diacids and (ii) ethylenediamine, and having a weight-average molecular mass of about 6000;
- polyamide polymers resulting from the condensation of at least one aliphatic dicarboxylic acid and at least one diamine, the carbonyl and amine  
25 groups being condensed via an amide bond; and
- polyamide resins from vegetable sources.

194. The composition according to claim 185, further comprising at least one amphiphilic compound that is liquid and non-volatile at room temperature and has a hydrophilic/lipophilic balance value of less than 12.

195. The composition according to claim 194, wherein said at least one amphiphilic compound comprises a lipophilic part linked to a polar part, the lipophilic part comprising a carbon-based chain comprising at least 8 carbon atoms.

5        196. The composition according to claim 194, wherein said at least one amphiphilic compound is present in an amount ranging from 0.1% to 35% by weight relative to the total weight of the composition.

197. The composition according to claim 196, wherein said at least one amphiphilic compound is present in an amount ranging from 1% to 20% by weight relative to the total weight of the composition.

198. The composition according to claim 197, wherein said at least one amphiphilic compound is present in an amount ranging from 1% to 15% by weight relative to the total weight of the composition.

199. The composition according to claim 185, further comprising at least one coloring agent.

200. The composition according to claim 199, wherein said at least one coloring agent is chosen from lipophilic dyes, hydrophilic dyes, pigments and nacles.

201. The composition according to claim 199, wherein said at least one coloring agent is present in a proportion of from 0.01% to 50% relative to the total weight of the composition.

202. The composition according to claim 185, wherein said composition is in the form of a rigid gel.

203. The composition according to claim 240, wherein said composition further comprises at least one wax.

204. The composition according to claim 203, wherein said at least one wax is chosen from beeswax, carnauba wax, candelilla wax, ouricury wax, Japan wax, cork fibre wax, sugar cane wax, paraffin wax, lignite wax, microcrystalline waxes, lanolin wax, montan wax, ozokerites and hydrogenated oils, polyethylene waxes, waxes obtained by Fischer-Tropsch

synthesis, fatty acid esters and glycerides that are solid at 40°C, and silicone waxes.

205. A mascara, an eyeliner, a foundation, a lipstick, a make-up-removing product, a make-up product for the body, an eyeshadow, a face powder, a concealer product, a shampoo, a conditioner, an antisun product or a care product for the lips or hair comprising a composition comprising at least one liquid fatty phase in said mascara, eyeliner, foundation, lipstick, blusher, make-up-removing product, make-up product for the body, nail composition, eyeshadow, face powder, concealer product, shampoo, conditioner, antisun product or care product for the lips or hair which comprises:

(i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler.

206. A mascara, an eyeliner, a foundation, a lipstick, a make-up-removing product, a make-up product for the body, a nail composition, an eyeshadow, a face powder, a concealer product, a shampoo, a conditioner, an antisun product or a care product for the lips, hair or nails comprising a composition comprising at least one liquid fatty phase in said mascara, eyeliner, foundation, lipstick, blusher, make-up-removing product, make-up product for the body, nail composition, eyeshadow, face powder, concealer product, shampoo, conditioner, antisun product or care product for the lips, hair or nails which comprises:

(i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler, with the proviso that said at least one inert filler is not acrylates copolymer or stearylalkonium hectorite.

207. A deodorant product or a care product for the skin, lips, or body

comprising a composition comprising at least one liquid fatty phase in said product which comprises:

(i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based  
5 repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler, with the proviso that said at least one inert filler is not acrylates copolymer, silica, talc, or a bentonite clay.

208. A care product for the skin, lips, or body  
comprising a composition comprising at least one liquid fatty phase in said  
10 product which comprises:

(i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based  
repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler.

15 209. A care and/or treatment and/or make-up composition for keratinous fibers, lips or skin comprising at least one liquid fatty phase in said care and/or treatment and/or make-up composition for keratinous fibers, lips or skin which comprises:

(i) at least one structuring polymer comprising:

20 a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler.

210. A lipstick composition in stick form comprising at least one continuous liquid fatty phase, at least one inert filler for the fatty phase and at  
25 least one non-waxy structuring polymer having a weight-average molecular mass of less than 100 000 in said lipstick composition, said continuous liquid fatty phase, said at least one inert filler, and said at least one non-waxy structuring polymer being present in said lipstick composition.

211. An eyeshadow composition comprising at least one liquid fatty  
30 phase in said eyeshadow composition which comprises:

(i) at least one structuring polymer comprising:  
a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler.

5        212. A lipstick composition comprising at least one liquid fatty phase in said lipstick composition which comprises:

(i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and

10        (ii) at least one inert filler.

213. A foundation composition comprising at least one liquid fatty phase in said foundation composition which comprises:

(i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and

15        (ii) at least one inert filler.

214. A method for care, make-up or treatment of keratinous fibers, lips, or skin comprising applying to said keratinous fibers, lips, or skin a composition comprising at least one liquid fatty phase which comprises:

20        (i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler.

215. A method for providing an anhydrous composition having at least one property chosen from a solid appearance, non-exudation, shear-strength, gloss, and comfortable deposit on keratin materials chosen from lips, skin, and keratinous fibers, comprising including in said composition at least one liquid fatty phase which comprises:

(i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler, with the proviso that said at least one inert filler is not acrylates copolymer, silica, talc, or a bentonite clay.

- 5        216. A structured composition comprising at least one liquid fatty phase structured with at least one structuring polymer comprising a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom, wherein the at least one structuring polymer further comprises at least one chain chosen from
- 10        (i) terminal fatty chains, optionally functionalized, chosen from alkyl and alkenyl chains, bonded to the polymer skeleton via at least one linking group chosen from amides, ureas, and esters, and
- (ii) pendant fatty chains, optionally functionalized, chosen from alkyl and alkenyl chains, bonded to the polymer skeleton via at least one linking group
- 15        chosen from amides, ureas, and esters,
- wherein when said at least one linking group is chosen from esters, said at least one terminal fatty chain is chosen from branched alkyl groups, and further comprising at least one inert filler, with the proviso that said at least one inert filler is not acrylates copolymer, silica, talc, or a bentonite clay.

- 20        217. A make up or care or treatment composition for the skin, the lips, or keratinous fibers comprising a structured composition comprising at least one liquid fatty phase structured with at least one structuring polymer comprising a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom, at least one inert filler,
- 25        and at least one coloring agent.

218. A method of making up or caring for skin, lips, or keratinous fibers comprising applying to said skin, lips, or keratinous fibers a structured composition comprising at least one liquid fatty phase structured with at least one structuring polymer comprising a polymer skeleton comprising at least



one hydrocarbon-based repeating unit comprising at least one hetero atom and at least one inert filler.

219. A anhydrous composition comprising at least one liquid fatty phase which comprises:

5 (i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least three hydrocarbon-based repeating units comprising at least one hetero atom; and

(ii) at least one inert filler.

220. An anhydrous composition according to claim 219,  
10 wherein said at least three hydrocarbon-based repeating units are identical.

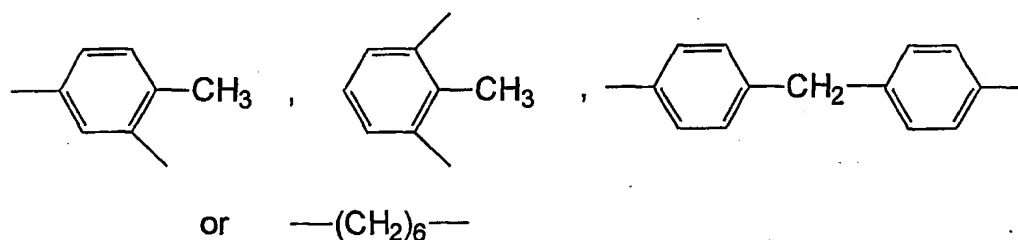
221. A composition comprising at least one liquid fatty phase which comprises:

(i) at least one structuring polymer chosen from urea urethanes having the following formula:

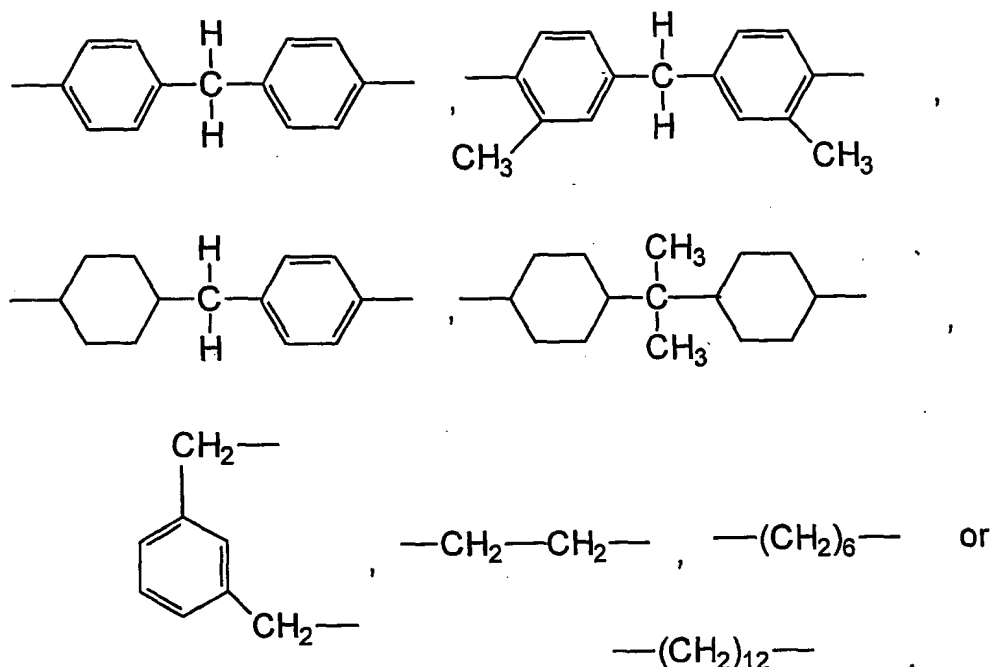
15 
$$\text{R-O-CO-NH-R'-NH-CO-NH-R''-NH-CO-NH-R'-NH-CO-OR}$$

wherein R represents  $\text{C}_n\text{H}_{2n+1}-$ , wherein n represents an integer having a value greater than 22 or  $\text{C}_m\text{H}_{2m+1}(\text{OC}_p\text{H}_{2p})_r-$ , wherein m represents an integer having a value of greater than 18, p represents an integer having a value of from 2 to 4, and r represents an integer having a value of from 1 to 10.

20 R' represents:



and R'' represents:



; and

(ii) at least one inert filler.

222. A composition comprising at least one liquid fatty phase which  
5 comprises:

(i) at least one structuring polymer comprising

a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom with the proviso that said at least one hetero atom is not nitrogen; and

10 (ii) a at least one inert filler.

223. A composition comprising at least one liquid fatty phase which comprises:

(i) at least one structuring polymer comprising: a polymer

skeleton which comprises a) at least one hydrocarbon-based repeating unit

15 comprising at least one hetero atom and b) at least one of:

- at least one terminal fatty chain, optionally functionalized, chosen from alkyl chains and alkenyl chains, wherein said at least one terminal fatty chain is bonded to said polymer skeleton via at least one linking group; and

- at least one pendant fatty chain, optionally functionalized, chosen  
5 from alkyl chains and alkenyl chains, wherein said at least one pendant fatty chain is bonded to said polymer skeleton via at least one linking group; and

(ii) at least one inert filler.

224. A make-up composition in stick form comprising at least one continuous liquid fatty phase, at least one inert filler, and at least one non-  
10 waxy structuring polymer having a weight-average molecular mass of less than 100, 000.

225. A method for care, make-up or treatment of keratin materials comprising applying to said keratin materials a composition comprising at least one liquid fatty phase which comprises:

15 (i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler, with the proviso that said at least one inert filler is not acrylates polymer, silica, talc, or a bentonite clay.

20 226. A method for care, make-up or treatment of keratin fibers comprising applying to said keratin fibers a composition comprising at least one liquid fatty phase which comprises:

(i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based  
25 repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler.

227. A method for increasing at least one of the hardness of a composition, its shear strength and its heat resistance, comprising including in said composition at least one liquid fatty phase which comprises:

30 (i) at least one structuring polymer comprising:

a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and

(ii) at least one inert filler, with the proviso that said at least one inert filler is not acrylates polymer, silica, talc, or a bentonite clay.

5        228. A method for making a physiologically acceptable cosmetic composition comprising including in a cosmetic composition at least one liquid fatty phase which comprises:

(i) at least one structuring polymer comprising:

10        a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom, wherein said at least one structuring polymer further optionally comprises at least one of:

at least one terminal fatty chain comprising 8 to 120 carbon atoms, wherein said at least one terminal fatty chain is bonded to said polymer skeleton via at least one linking group; and

15        at least one pendant fatty chain comprising 8 to 120 carbon atoms, wherein said at least one pendant fatty chain is bonded to any carbon or hetero atom of said polymer skeleton via at least one linking group; and

(ii) at least one inert filler, with the proviso that said at least one inert filler is not acrylates polymer, silica, talc, or a bentonite clay.

20        229. A structured composition comprising at least one liquid fatty phase structured with at least one structuring polymer comprising a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom, wherein the at least one structuring polymer further comprises at least one of: terminal and pendant fatty chains, optionally functionalized, said terminal and pendant fatty chains comprising at  
25        least one chain chosen from alkyl and alkenyl chains, bonded to the polymer skeleton via at least one linking group chosen from amides, ureas, and esters, wherein when said at least one linking group is chosen from esters, said terminal fatty chains are chosen from branched alkyl groups, wherein  
30        said at least one liquid fatty phase also comprises at least one inert filler, with

the proviso that said at least one inert filler is not acrylates copolymer, silica, talc, or a bentonite clay.

230. A structured anhydrous composition comprising at least one liquid fatty phase structured with at least one structuring polymer comprising a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom, wherein the at least one structuring polymer further comprises at least one of: terminal and pendant fatty chains, optionally functionalized, said terminal and pendant fatty chains comprising at least one chain chosen from alkyl and alkenyl chains, bonded to the polymer skeleton via at least one linking group chosen from amides, ureas, and esters, wherein when said at least one linking group is chosen from esters, said terminal fatty chains are chosen from branched alkyl groups, wherein said at least one liquid fatty phase also comprises at least one inert filler.

231. A skin or lip care composition comprising a structured composition comprising at least one liquid fatty phase structured in said composition with at least one structuring polymer comprising a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom, at least one inert filler, and at least one coloring agent.

232. A keratinous fiber treatment, care or make-up composition comprising a structured composition containing at least one liquid fatty phase structured in said composition with at least one structuring polymer comprising a polymer skeleton comprising at least one hydrocarbon-based repeating unit comprising at least one hetero atom, at least one inert filler, and at least one coloring agent.

233. A method of making up or caring for skin, lips or keratinous fibers comprising applying to said skin or keratinous fibers a structured composition containing at least one liquid fatty phase structured with at least one structuring polymer comprising a polymer skeleton comprising at least

one hydrocarbon-based repeating unit comprising at least one hetero atom and at least one inert filler.

234. A composition comprising at least one liquid fatty phase in said composition which comprises:

- 5 (i) at least one structuring polymer comprising:  
a polymer skeleton which comprises at least three hydrocarbon-based repeating units comprising at least one hetero atom; and  
(ii) at least one inert filler, with the proviso that said at least one inert filler is not silica or talc

10 235. A composition comprising at least one liquid fatty phase in said composition which comprises:

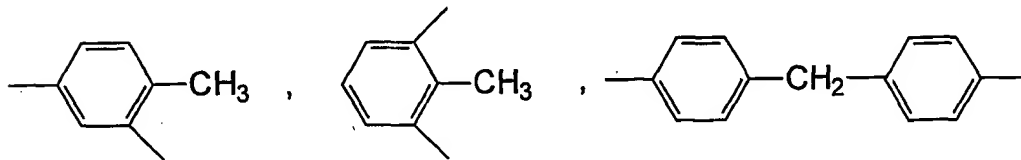
(i) at least one structuring polymer chosen from urea urethanes having the following formula:



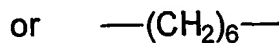
15 wherein R represents  $\text{C}_n\text{H}_{2n+1}-$ , wherein n represents an integer having a value greater than 22 or  $\text{C}_m\text{H}_{2m+1}(\text{OC}_p\text{H}_{2p})_r-$ , wherein m represents an integer having a value of greater than 18, p represents an integer having a value of from 2 to 4, and r represents an integer having a value of from 1 to 10.

R' represents:

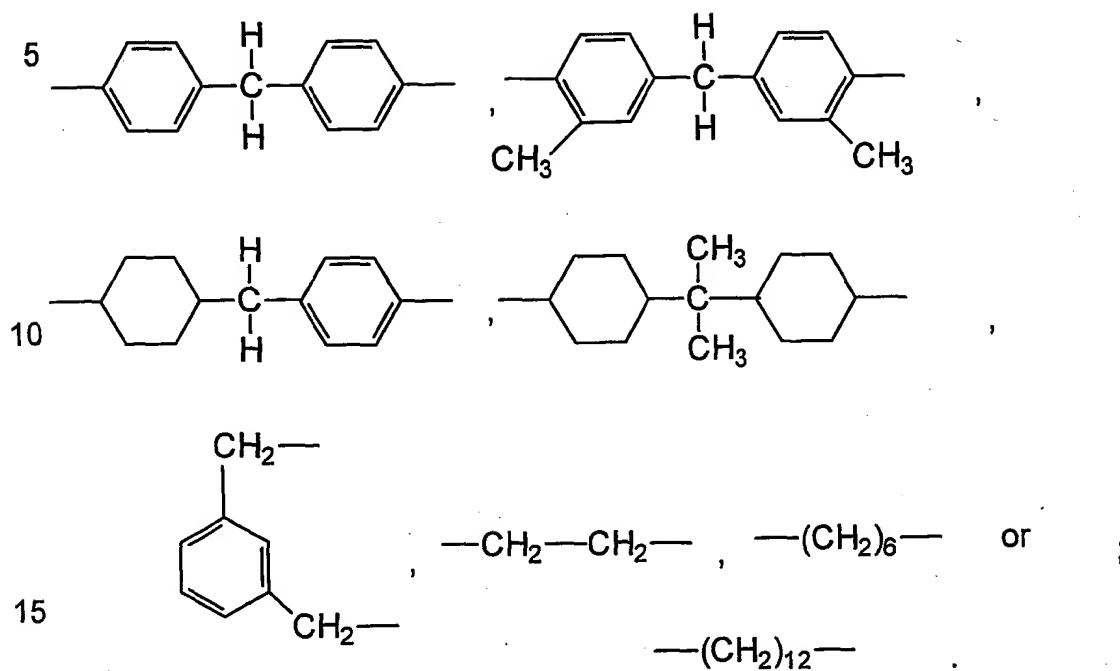
20



25



and R'' represents:



and

(ii) at least one inert filler.

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB 00/02000

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K7/02 A61K7/025 A61K7/027

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 871 536 A (ARRAUDEAU JEAN-PIERRE ET AL) 3 October 1989 (1989-10-03) claims 1,2,5,7-10; examples 7,8,17	1-235
X	US 6 103 249 A (ROULIER VERONIQUE ET AL) 15 August 2000 (2000-08-15) claims 1,6,20,21,39-41	1-235
E	EP 1 068 856 A (OREAL) 17 January 2001 (2001-01-17) page 4, paragraph 35 page 6, paragraph 51 page 9, paragraph 76; claims	1-235

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*Z\* document member of the same patent family

Date of the actual completion of the international search

1 August 2001

Date of mailing of the international search report

08/08/2001

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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 1-235

Present claims 1-235 relate to an extremely large number of possible products. Support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the compounds/products/apparatus/methods claimed. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Consequently, the search has been carried out for those parts of the claims which appear to be supported and disclosed, namely those parts relating to the products prepared in the examples 1-5.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB 00/02000

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